

Special Project

Form and emotion

V P B CHAKRAVARTHI . K

0 2 6 1 3 0 0 9

Guide : Prof. **B.K.CHAKRAVARTHI**

IDC , IIT-Bombay

March 2004

APPROVAL SHEET

The industrial design special project

Form and Emotion

By

V P B CHAKRAVRTHI.K

02613009

is approved for the partial fulfillment of the requirements for
the post-graduate degree of

Master of Design in **Industrial Design** at

Industrial Design Centre,
Indian Institute Of Technology, Bombay

Guide.....

External examiner.....

Internal examiner.....

Table of contents

1.	Abstract	4
2.	Introduction	5
3.	Analysis	6
4.	Data collection.....	13
5.	Focus	20
6.	Emotionally driven products.....	21
7.	Research direction	24
8.	Research study.....	28
9.	Methodology explanation.....	29
10.	Analysis of the method.....	31
11.	Conclusion	33
12.	References	34
13.	Annexure	36

Abstract

The user emotional experience is towards the products has been argued to become increasingly important in the development of new products. A difficulty with handling the individual emotional responses towards products seems to be as intangible as it is appealing . A problem with many of the existing design methods and models for understanding the emotional experience is that they relay on the personal interpretation of the designer. An interpretation which is hard to communicate and justify through a product development project. In most markets, product differentiation is difficult because products are similar in respect to their technical characteristics, quality and price. Only emotional responses can incite the customer's first impression of product that strongly influences purchase decisions. The focus of research is to present the process, technique and the specifications that involve user in the design process, enabling designer to manipulate the emotional impact of his designs on the user by capturing the intended expressions in form, that matches with what user desires to see and feel, thereby preserving the longevity of the emotional fit between the product and the user.

Introduction

Humans are wanting animals who rarely reach state of complete satisfaction, because once one desire has been satisfied another will soon rise to take place. On the basis of hierarchy of user needs, the functionality and the usability of the products no longer is enough to satisfy the user needs. The next step in the hierarchy exists in the users emotional experience towards the product.

Today companies are forced to consider aspects concerning the emotional response towards products with a structured approach. A difficulty with handling this is however that the individual's emotional experience seems to be as intangible as it is appealing. There are numerous methods and models present on how designer should be able to understand the emotional experience of the user. All the techniques are considered as useful in the design process, but one of their limitations is that they rely strongly on the subjective interpretation of the designer, which makes them unsuitable for the use in the main study.

This research focuses on understanding the meaning of the emotional experiences in human-product interaction and through design cases study, user experience in general and develop user study and design methods to support development of richer product experiences.

Analysis



TORSO : Cutting through our thoughts, chopping up all feeling, baring each and every soul! The faces trampled down by guilt, scattered in the forces of bursting harmonies. Cold idyll disintegrating before the exposed discretion.
 A silence brought to speak.
 - Frank B. Ehemann , Sculptures in silver

Form

"Form is what we tend to perceive when an image is realized and concrete in a specified spatial environment, for the aesthetic qualities of an image or an object determine the degree to which its formal characteristics inspire psychological reactions in the viewer"

"A particular organization of the shape capable of arousing the emotional and ideational participation of the beholder"

- "shape and structure of any thing"
- "a perceptual structure"

Why study product emotions?

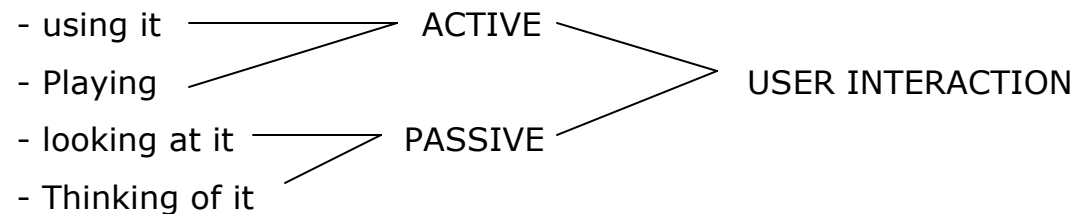
Emotions guide, enrich and ennoble life; they provide meaning to everyday existence; they render the valuation placed on life and property. This assertion illustrates that emotions play an important role throughout the span of our lives. A person's emotions enrich virtually all of his or her waking moments with either a pleasant or an unpleasant quality. Many studies have shown that emotions have a strong influence on our general experience of well-being, i.e. people's own evaluation of their lives. In addition, it is widely acknowledged that a substantial part of our emotions is elicited by 'cultural artifact's (e.g. art, clothing, and products). Similarly, in consumer research, emotions are often found to strongly influence satisfaction

Experience with the product

An effective Product experience refers to a large variety of psychological states such as

- Emotions
- Feelings
- Moods
- Sentiments
- Passions ...etc.

These can be induced just



In all the above cases we talk about the user interaction with the product whether it is active or passive.

The level of **experience** is classified as

Emotional experience

Of all affective states or experiences, the emotional experience is the most relevant for understanding product experience because only emotions imply a one-to-one relationship between the experience and the object emotional reaction towards a resented product.

Aesthetic experience

Emotion that has linked with a product appearance, aesthetic pleasure. Whether it constitutes a single emotion category or can include diverse emotions.

Consumer-product attachment

How to prolong the aesthetic appeal of products or , more broadly , to create a sustainable bond between user and product.

This project concentrates only on the emotional experience. Emotional responses elicited by the consumer products are the decisive factors in the purchase decisions.



Commonsense and research confirms that

“people use appearances to make judgments about realities”

It matters little whether

- the products are high priced / low priced
- they are technically complex/ simple
- the buyer is supremely sophisticated in the technology/ plain ignorant
- they buy themselves/ their relatives

Some times we get some irrational desire to buy a product for which we honestly have no use. We base our buying decision on the pleasure we receive from the product. We buy them because we like them. The urge of buying it is not elicited by the tangible product attributes, but by the intangible—highly personal construal of the product. And the measure of such emotion is not a mathematical one but aesthetical one.

Pleasurable things need not be always useful. Appearances and external expressions comes first of all.

Various **elements** of form such as structural precision or imprecision, texture, proportionate harmony and feelings, clarity or ambiguity etc., work on our personal thoughts and feelings. Emotions elicited by consumer products influence both the decision of the purchasing the product and pleasure of using it after purchasing.



Marketing intangible products
and product tangibles

- **Theodore levitt**

Aesthetic implications of form

- **Graham collier**



Form appreciation

A form can be appreciated even with closed eyes through the sense of touch. We all have personal reactions of thought and feelings to omnipresent presence of the form

At lowest level - comes the simple act of accepting or rejecting something when we shopping

At highest level - comes an intense feeling of recognition, understanding and a complete identification with the object through highlighted total consciousness (like a gothic cathedral, renaissance, baroque altar piece)

FORM = **SHAPE DERIVED FROM STRUCTURE** + **AESTHETIC AURA**

Aesthetic implications of form
- **Graham collier**





Emotional fit

Design should include product

- That **"fit"** the preferences of the user
- That elicit emotions that the user would like to experience
- That integrate subjective and objective wishes and demands

Many-a -times emotional response is due to in-tangible highly personal construal of the product (meaning yielded from the product) and not from the tangible product expressions or attributes.

How to achieve emotional fit?

Limitations

- It is difficult for the users to express what they feel about the products and why they feel (experiential factors).
- Then it will be Troublesome to designers to get the grip of the users feelings.
- Hence Designers can not depend on their own construal as there is no guarantee to suit with user's feelings.

Emotion through expression
Designing mobile
telephones with an emotional
fit

P.M.A. Desmet

**Delft University of Technology,
the Netherlands**

Department of Industrial Design

Approach

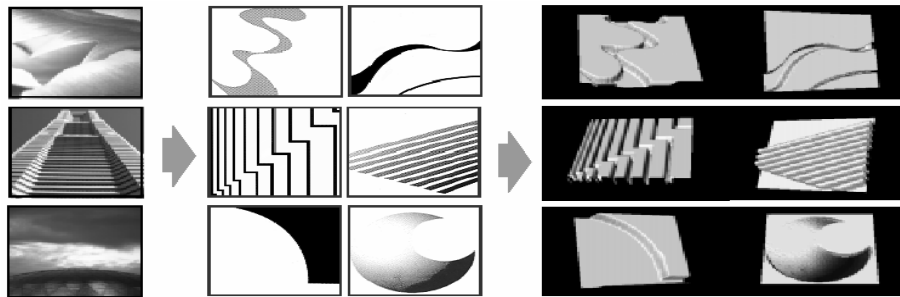
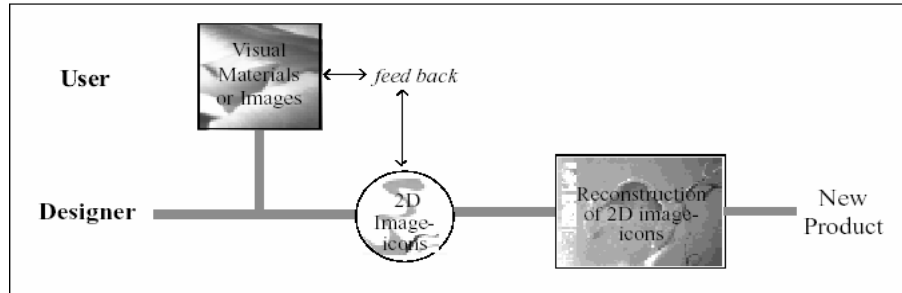
- Including user in the design process with mutual communication.
- Maintain balance between subjective and objective properties, functional and emotional expressions, information and inspirations
- Considering various properties(experience) of the product related to user. Which are contextual like handling , touching , hearing and taste.
- Effective interpretation of the users emotion and feelings

Methods(quantitative) existing to capture the emotional response of user's:

- QFD (Quality Function Deployment)
- Paired Comparison Method
- Scales of ranking
 - ratio scale, interval scale, ordinal scale

Data collection

Research paper - 1



Kansei design approach

Kansei design approach visual imagery is used to carry the subjective meanings, and the designer extracts form elements from inspirational material into abstracted 2D image-icons (pictorial image).

The visual frame that carries the subjective emotion arouses the viewer in to more or less same emotional state. That means the form elements in the visual that are contributing the emotion are very salient. Such inspirational form elements are picked up and transferred in to the 2-D sketches. These 2-D sketches are refined and abstracted in to the 2-D image icons, which carries "visual language" of the inspirational imagery. Then they are developed into the 3-D clay or plaster icons. The form thus generated is completely new form and substantially carry the same emotions that were suggested by the visual imagery. Then these forms are converted in to the product forms after series of refinements depending on the relevant inputs such as purpose, theme and use.

The *Kansei* model is needed in design to understand how people receive their impressions or emotions from the objects.

**Extending of design approach
based on Kansei By dynamic
manipulation of 3d objects**

SeungHee Lee

Pietwv Jan Stappers

Akira Harada

Research paper - 2

Emo-cards

This paper presents an approach to include the user in the design process in order to obtain an emotional fit between the product expression and the ensuing emotional construal.

Emo-cards are developed. The Emo-cards are based on the dimensions 'pleasantness' and 'arousal'. For the current application a non-verbal self-report measure was developed: the 'emocards'. Theemocards are based on the dimensions 'pleasantness' and 'arousal'. In psychology, these two dimensions of emotions are most accepted. Based on the two dimensions, Russell created a 'circumplex of emotions' (Russell,1980).The facial expressions of the 16 emocards represent eight distinct places on the circumplex (figure 1).

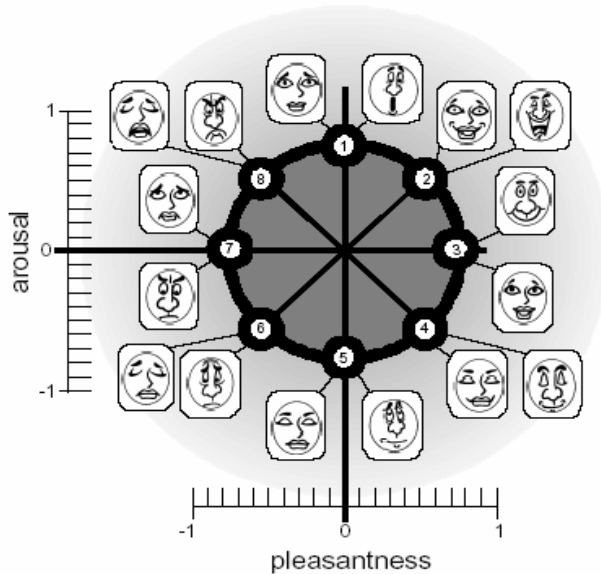


Figure 1. Circumplex of emotions and the emocards.

Each octant of the circumplex is represented by both a male and a female face. In an experiment, subjects can express their emotional responses to products by pointing out the card that best indicates their response. To assess the emotional responses elicited by mobile telephones, an emocard experiment was conducted with 12 mobile telephone users. Eight telephones that were on the market at that time served as stimuli (see figure 2). The emocards were randomly spread out on the table in front of the subject. After seeing all models, the subjects were asked to point out two emocards for each telephone. Subsequently, they were asked to point out one emocard that best expresses their most favored emotional response regarding mobile telephones. Furthermore, in an open interview, the results were discussed with the subject. In this discussion, the subject was asked to comment on his choice of emocards. Figure 2.

Emotion through expression
Designing mobile telephones with an
emotional fit

P.M.A. Desmet
 Delft University of Technology, the
 Netherlands.
 Department of Industrial Design

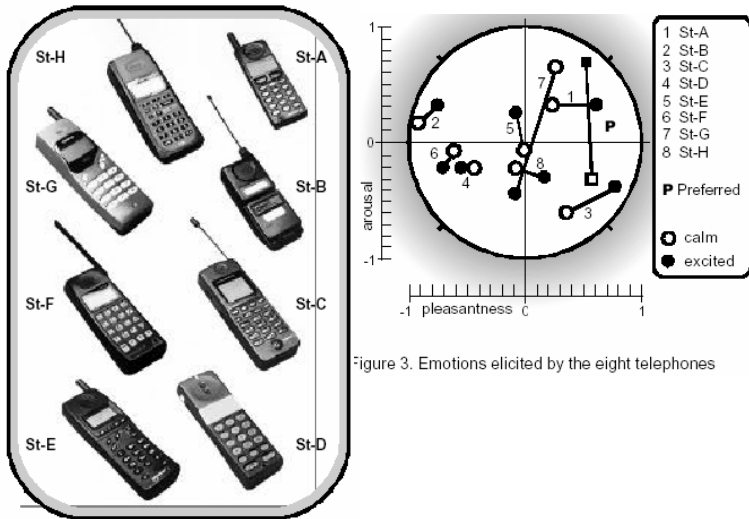


Figure 3. Emotions elicited by the eight telephones

Eight existing mobile telephones. The results show that the preferred emotional responses vary between subjects. Based on this variation, the subjects are separated into two groups of six subjects each. The first group, labeled as 'CALM', prefers a calm-pleasant emotional response, whereas the second group, labeled as excited, prefers an excited-pleasant response.

The goal of the design project is to design a telephone that elicits an emotional response that is located in the circumplex closer to the desired emotional response than the existing models. Nevertheless, the results of the emocard study show that two new models should be designed; one for the CALM and one for the EXCITED. Hence, in this project, two telephones are designed. The design strategy adopted in this paper is based on a model of product emotions that focuses on the role of the product in emotional responses.

From roughly 80 design sketches, 30 promising ideas were selected. These 30 ideas were worked out into form concepts. Based on the collages and the verbal expressions of table 1, two of the concepts were chosen: one concept for the EXCITED and one for the CALM. Helix is positioned closest to the preferred emotional response of the EXCITED. Therefore, it can be concluded that Helix elicits an emotional response that is preferred over the emotions elicited by the other models. On the other hand, model Logica is not positioned most close to the preferred emotional response of the CALM.



Logica



Helix

Research paper - 3

Understanding emotional response to product form

The aim of the whole study was to in a structured approach investigate the relation between aesthetic visual appearance and user experience. Based on the results from previous studies, the study's purpose was to see if it was possible to find relations between the retrieved emotional profiles and the product formats.

Method

Material

The analysis was performed on the basis of the tables that had been generated in main study one and two.

Procedure

Based on the average for each of the visual stimuli's emotional profile were a graph generated (see figure 5). By visually searching for resemblance among the curves, two different groups (each consisting of four and stimulus) were distinguished, for example see picture 6. Because of the high variance in the analyzed results it was not considered suitable to pick out a totally neutral emotional profile. It was also considered by the author that this factor also made the found groups clearly uncertain. For each of the groups, the sums of the different form entities were calculated. The values were analyzed concerning which form entities had high values (calculating the per cent of the total possible value) in the group and comparing the results with the other groups. 1 ,5

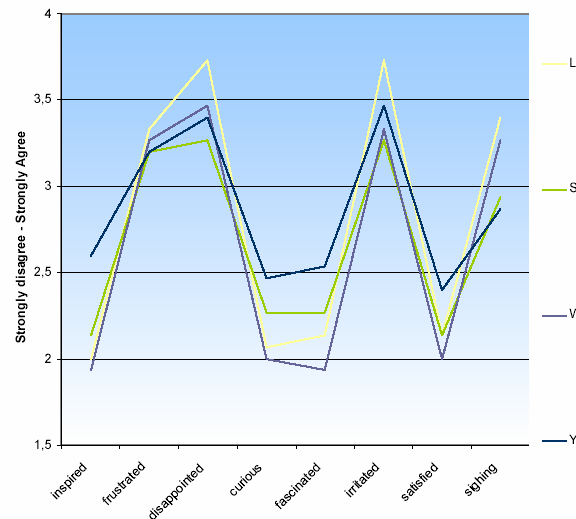


Figure 5 Example of visual grouping of curves

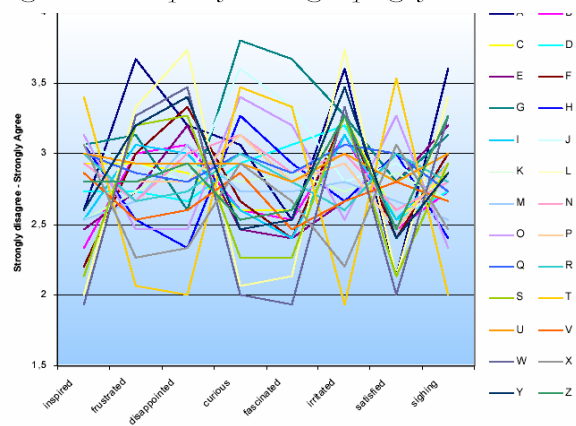


Figure 6 Emotional profiles for the studied stimulus

Oscar Person

Department of Product Design Norwegian
University of Science and Technology

Stimuli	Emotional profile	Product format
	The stimuli were graded - below average concerning words associated with the ideal mobile phone - above average concerning the words associated with the undesirable mobile phone = the stimuli were <i>experienced negative</i>.	The stimuli were graded high on: - slim, symmetric and with distinctive parallel lines - contrasting colours - rectangular and circular shapes - no visible antenna - straight horizontal and vertical alignment and repetitive rounded button shape - broad and plain rectangular shape of the screen
	The stimuli were graded - as not being connected with the negative words - as almost neutral concerning the words associated with the ideal mobile phone = the stimuli were <i>experienced as positively neutral</i>	The stimuli were graded high on: - narrowing body shape with distinct side lines - circular shapes - no visible antenna - horizontal alignment downward and narrowing alignment of the number buttons - Ellipse shaped buttons - Tall expanding shape of the screen

Table 3 Summary of the emotional profiles and the product formats for the distinguished groups

Results

For each of the groups it was possible to distinguish a specific product format. The results of the study are summarized in table 2. In the analysis of the groups it became clear that both Mobile phones from the same and different manufacturer ended up having similar emotional profiles in the study. In the negatively experienced group were three out of four from the same manufacturer. Whereas in the positively neutral group was all four of different brand.

Comments

The examination of the data should merely be seen as a first analysis of the data retrieved through the main studies. Further studies are required in order to test if it really exist a relationship between the specified product format and the distinguished emotional profile, studies that has not been possible to conduct due to practical problem. In the analysis, the groups became quite small making the results highly dependent on individual mobile phones. In order to reduce this effect, future studies should contain larger samples of visual stimulus. The grouping of emotional profile became a difficult task due to the little difference among the curves. This might arise from the number of participants in the study. Another possible suggestion would also be that the chosen method for retrieving the emotional experience was insufficient. In order to determine either of the cases it is necessary with further testing and development of the used technique.

The need and demand for understanding the user's emotional response towards product appearance will increase with the importance of the aesthetic product form as a competitive factor. The perspectives of the field studied in this paper are wide open. The presented work deals only with parts of the relation between emotional experience and the visual appearance of the product. The study presented in this paper had two main purposes. The first was to see if it was possible to in a structured manner find a relationship between product form and emotional response. The second was to investigate if it was possible to decrease the subjectivity by the individual in the process. The method was considered during the course of work to be less subjective than many of the existing methods for increasing the understanding of the relation between product appearance and the user's experience. Despite the fact that it was possible to find resemblance among the grouped mobile phones, there is nothing in the results that gives proof for the relationship between visual appearance and emotional response. If the method should be proven as successful, the development of the method, it is proposed to focus especially on functional methods for acquiring the user's emotion profile. The use of nonverbal technique should definitely be investigated further, and if considered suitable to be incorporated in the method. The technique detailed in this paper might through further research enable people involved in the design practice to tap deeper into user's emotional experience towards visual form, leading to more informed decision-making in the design process.

Focus

Frank B.
Ehemann

Sculptures in
silver

Haus am See

D-27308
Kirchlinteln

Shunyata

Fantasy and intuition are disruptive forces prying open the fetters of the soul: Already you sprout wings, spread the pinions, suspect the perfection of sublime flight to escape the base plains of humanity where sorrow and licentious instincts dwell. As yet the gravity of life ties you to the ground; the chimera of reality deprives you of your senses - your spirit is captured in the net veiling continents and oceans. Be assured: He will elevate himself in the struggle for freedom and deliverance and leave behind all murky dungeons.

The main focus area of the research is to

Study of the user's domain regarding the emotional implications of the form expressions.

Importance of the expression on form

The innate sensitivity of the form should have significance of the beauty, and perfection, Psychology of aesthetic sensitivity, Urge of possession, Faculty for identifying with the object.

This can be achieved in the product form by incorporating the expression that user likes most to see and responses emotionally. That means the product form should have the expression which elicit emotion in the user. Emotions guide, enrich and ennoble life; they provide meaning to everyday existence; they render the valuation placed on life and property". This assertion illustrates that emotions play an important role throughout the span of our lives. A person's emotions enrich virtually all of his or her waking moments with either a pleasant or an unpleasant quality. Many studies have shown that emotions have a strong influence on our general experience of well-being, i.e. people's own evaluation of their lives. In addition, it is widely acknowledged that a substantial part of our emotions is elicited by 'cultural artifact's (e.g. art, clothing, and products). Similarly, in consumer research, emotions are often found to strongly influence satisfaction.

" When form appears complete and unalterable....when we sense that any addition or subtraction would ruin the complete ness...when form is charged with hidden meaning when it coincides with our desires....when it invites our physical or imaginative possession and.... the subsequent loss of our own identity in identification with itself- Then for a moment we become involved with the mystery of an aesthetic response "-Graham collier

Emotionally driven products

PROLOGUE: THREE TEAPOTS

DONALD A. NORMAN

"If you want a golden rule that will fit everybody, this is it. Have nothing in your houses that you do not know to be useful, or believe to be beautiful."
—William Morris "The Beauty of Life," 1880

Among the collection of teapots. One of them is completely unusable—the handle is on the same side as the spout. It was invented by the French artist Jacques Carelman, who called it a coffeepot: a "coffeepot for masochists." (fig.01)

The second item is the teapot called Nanna whose unique squat and chubby nature is surprisingly appealing (fig.02). The third is a complicated but practical "tilting" pot made by the German firm Ronnefeldt. (fig.03)

The Carelman pot is, by intent, impossible to use. The Nanna teapot, designed by the well-known architect and product designer Michael Graves, looks clumsy but actually works rather well. The tilting pot, which I discovered while enjoying high tea at the Four Seasons Hotel in Chicago, was designed with the different stages of tea brewing in mind.

Which one of these teapots do really useable..... None of them.

To drink tea every morning at an early hour, efficiency comes first. So, Japanese hot pot is used to boil water while the spoon cut tea leaves into a little metal brewing ball. Drop the ball into cup, fill it with boiling water, wait a few minutes for it to steep, and tea is ready to drink. Fast, efficient, easy to clean.



Figure-0.1
My impossible teapot.2



Figure-0.2 Michael Graves's Nanna teapot. So charming I couldn't resist it.3



Figure 0.3 The Ronnefeldt "tilting" teapot. Put leaves on the internal shelf (not visible, but just above and parallel to the ridge that can be seen running around the body of the teapot), fill with hot water, and lay the teapot on its back. As the tea darkens, tilt the pot. Finally, when the tea is done, stand the teapot vertically, so the water no longer touches the leaves and the brew does not become bitter.4



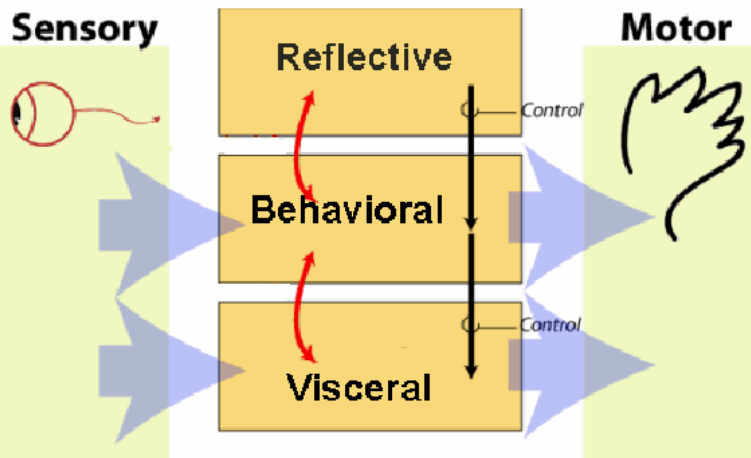
Figure 4. Three teapots: as works of art in the window above the kitchen sink.

Donald A. Norman explains,...

"Why am I so attached to my teapots? Why do I keep them out on display, in the alcove formed by the kitchen window? Even when they are not in use, they are there, visible, even when I am making tea without them."

"I value my teapots not only for their function of brewing tea, but because they are sculptural artwork. I love standing in front of the window, comparing the contrasting shapes, watching the play of light on the varied surfaces. When I'm entertaining guests or have time to spare, I brew my tea in the Nanna teapot for its charm or in the tilting pot for its cleverness. Design is important to me, but which design I choose depends on the occasion, the context, and above all, my mood. These objects are more than utilitarian. As art, they lighten up my day. Perhaps more important, each conveys a **personal meaning**: each has its **own story**. One **reflects my past, my crusade** against unusable objects. One **reflects my future, my campaign** for beauty. And the third represents a **fascinating mixture of the functional and the charming**".

The story of the teapots illustrates several components of product design: usability (or lack thereof), aesthetics, and practicality. In creating a product, a designer has many factors to consider: the choice of material, the manufacturing method, the way the product is marketed, cost and practicality. How easy is the product to use, to understand? But what many people don't realize is that there is also a strong **emotional component** to how products are designed and put to use.



The teapots also illustrate three different aspects of design: visceral, behavioral, and reflective. *Visceral* design concerns itself with appearances. Here is where the Nanna teapot excels—I so enjoy its appearance, especially when filled with the amber hues of tea, lit from beneath by the flame of its warming candle. *Behavioral* design has to do with the pleasure and effectiveness of use. Here both the tilting teapot and my little metal ball are winners. Finally, *reflective* design considers the rationalization and intellectualization of a product. Can I tell a story about it? Does it appeal to my self-image, to my pride? I love to show people how the tilting teapot works, explaining how the position of the pot signals the state of the tea. And, of course, the “teapot for masochists” is entirely reflective. It isn’t particularly beautiful, and it’s certainly not useful, but what a wonderful story it tells!



Figure 0.5 The Mini-Cooper: “it is fair to say that almost no new vehicle in recent memory has provoked more smiles.”

Beyond the design of an object, there is a personal component as well, one that no designer or manufacturer can provide. The objects in our lives are more than mere material possessions. We take pride in them, not necessarily because we are showing off our wealth or status, but because of the meanings they bring to our lives. A person’s most beloved objects may well be inexpensive trinkets, frayed furniture, or photographs and books, often torn, dirty, or faded. A favorite object is a symbol, setting up a positive frame of mind, a reminder of pleasant memories, or sometimes an expression of one’s self. And this object always has a story, a remembrance, and something that ties us personally to this particular object, this particular thing.

Research direction

Problems to deal with, during the research related to the understanding about the emotive intent of the user

How to capture expressions in form, that are related to what user desires or had already in mind ?

Is it possible to specify a new research direction for the interplay between emotion and design ?

Emotional parameters of Products, identified after the study of research papers and articles

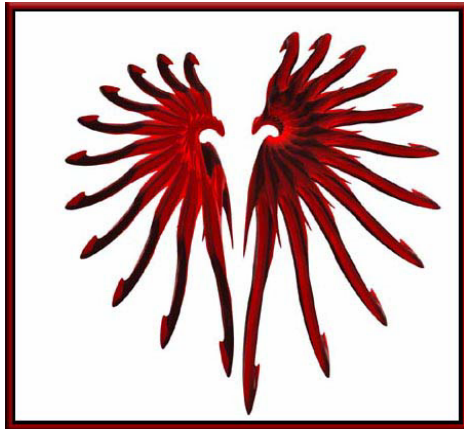
1) **Life cycle of a emotive product** :- It is one thing to design products that elicit certain emotions; it is another matter to maintain those emotions that have been generated. It is desirable to maintain the emotional content of a product throughout its entire physical lifespan. (from research paper-1)

2) **Longevity** :- It is an acceptable solution, to design emotionally demanding products in order to guarantee the longevity of its emotional lifespan. (from research paper-2)

3) **Adoption of product to the user** :- One can also argue for the opposite strategy of letting product emotions evolve on their own accord in collaboration with their users. If it is not desirable to envisage and program these emotions, how can we design a product that will adapt itself to the different emotional needs of its user is a question. (from research paper-3)

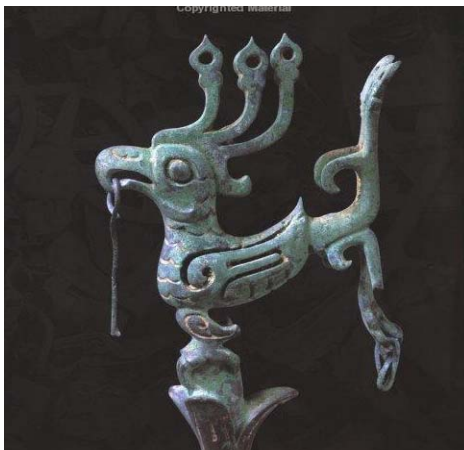
4) **Product non-use (reflective design)** :- what about emotional aspects of product non-use is another important aspect .Within this theme i want to address the emotional involvement of the user in any design conceptualization. (from Donald. A. Norman's article)

Based on the emotive product parameters derived from the research study, the direction of the research can proceed further in 3 different ways that are listed below.



Direction-1

- selecting a object (flower,leaf,animal etc.) from the nature that has strong aesthetic appeal as form.
- drawing out cluster of visuals freely and deliberately exaggerating the particular aspect that appeals .
- Showing the user and asking him to observe the drawings and decide if it appeals as much as original object.
- Analyzing “yes” or “no” and “why” and “where”



Direction-2

- Try to get abstract from great paintings(El Greco,Rubens,Titan) or old sculptures ,weapons,from museums
- providing cluster of images to the user and asking to pick out the main forms of the design which he feels are exhibiting expression he feel
- picking out the main forms,main rhythms which hold design together, attempting to express these forms and their rhythms in proposed product in the form of sketches
- asking the user to rate which will be an expressive abstract of the original .



Direction-3

- Involving the user in the design process and this simplifies the complexity of “understanding user”.
- Letting him to come out with what he wants from the design and want to see in the product form.
- He him self given liberty to choose the visual imagery and artifacts which he is emotionally involved with along with the personal feelings verbally mentioned.
- These clues are interpreted by the designer as he will be provided with richer information from the user side.

Among all the three, **Direction-3** is selected as the research direction as it is more relevant to the emotional experience of the user. This makes the user more involved and there by helps in understanding his emotional intent towards the products based on the parameters mentioned.

Research study

The qualitative user study aims at understanding the life and values of people to find opportunities for product concept design by making a deep but narrow cut into the life of ten regularly exercising people of different ages and health conditions. The rich and visual data collected will be used to create empathy in the designers for the users in the aim to create new and better products for people.

This method focuses on understanding the meaning of emotional experiences in human-product interaction and through design cases study user experience in general and develop user study and design methods to support development of richer product experiences.

The user study

Several methods can be used in the user study to collect a rich and inspiring data: a focus group, diaries, open questions, self-photographing, interviews and collage making. The open questions were to understand verbally expressible attitudes and values and the projective methods – photography and collage – to gain understanding and visual material about more latent feelings which the user may not express verbally.

The focus group

A focus group will be first organized to achieve a basic understanding of the area and to ensure the research material is appropriate. The focus group is supposed to have a general picture of who the people were, and of their lifestyles and exercise habits.

Methodology Explanation

Focus group research material

The users will be given a package containing a diary, a disposable camera and open questions.

The idea of this specific material is to make the users feel positive about the research and willing to be involved. Designing the material prepared us for an empathic approach.

Step-1

For one week the users will fill in a diary about their everyday well-being, health and exercising and other thoughts that these issues raised. There are also allowed to use optional little stickers for illustrating moods.

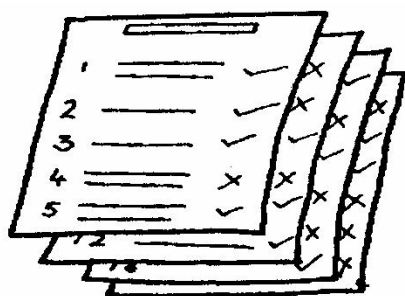
Step-2

The disposable camera goes with list of themes for self photography e.g. my fridge, a favorite place, something tempting. User is given liberty to fill the camera with all his personal and emotional reflections.

Step-3

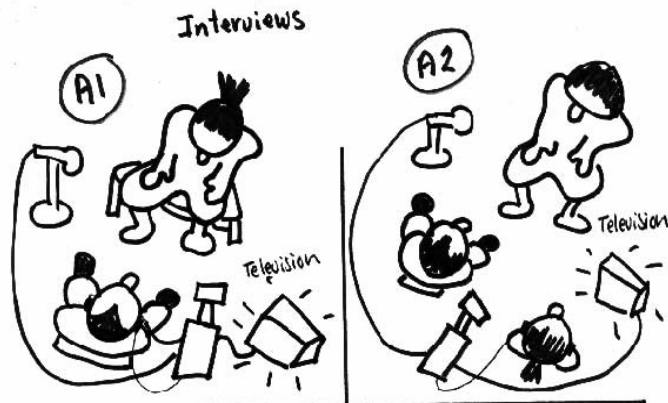
The open questions, e.g. what causes stress and how do you handle it, were on separate cards illustrated with thought-provoking images (emocards). This expresses what kind of psychological states they enter at times.

To get an overview of each user a user profile will be created according to the material.



The idea for the package was inspired by the Cultural Probes research (Gaver et al. 1999, Wensveen 1999)

After one week.....



The interview

Each user was then invited to an interview to discuss the received material and further issues like the user profile. The photographs were also explained by the user

Collage making

The users will make quick collage describing their ideal well-being and exercise assistant. The material consisted of pre-selected images and words of feelings, activities, environments and products. This will bring out the inner elicited emotions of the user and what he want to reflect and likes to see.

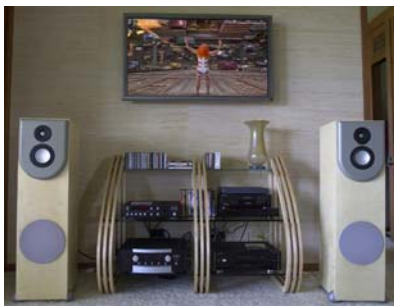
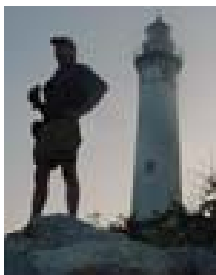


After this experiment, the material will be analyzed and the results will be communicated with selected dairies and photos/visuals in some brain-storming workshop and design ideas and concepts will be worked out. Concepts out of such activity will be sure match with the emotional construal of the user.

Analysis of the method

Looking at the parameters and the methodology, the following analysis is made.

- By organizing the focus group it is possible to get an idea of the users and clear some pre-conceptions so that they can get prepared to the experiment. Also, the face to face meeting with the researchers and other users as well as the discussion will make the users feel more **involved and interested** about the study.
- Designing the research material will be fun and getting the material back shall be exciting. It was **easy to be empathic**.
- Reading the diaries about people's everyday **life and values** will bring involvement into users daily life. The users will be enquired whether they are willing to discuss even very personal and intimate issues. The diaries will also help in revealing e.g. the **importance of nature and social activities in the everyday life**, which may not so obvious from the focus group discussion. **Longevity** and **emotive life span** of the products can be found out with this step-1.
- Discussing the issues and the photographs/visuals in the interview will create a **feeling of understanding**. The users are allowed to explain e.g. about their health crises and about their **relationships with objects and places**. This will reveal the issues regarding **adaptability of the product** to the **emotional needs of the user** (step-2 and step-3)
- The photographs can be used as projective material as well as for presenting the physical **environment** of the user.



- In the collages the users produce a **visual and emotional description** of the elements that belong to their feeling of well-being. The value of the collage is mostly in the explanation of the ideas behind the chosen pictures. When explaining their ideas they will be able to verbalize. This will help in knowing the **non-use aspects** of the products and still why they are attached to them.

Conclusion

When designers begin creating the new product, they need to make explore new shape and elements which represent the preferences of the target users.

The first purpose of this study is that these methods of studying people can reveal their values, lifestyle, how they take care of their health and well being, as well as what makes them feel good and how.

The Second is that this will **involve the user in the design process** and this simplifies the complexity of “**understanding user**”. The study focuses on the human behaviors including emotional actions and responses.

This methodology of emotive product form generation will be helpful in conceptualizing new design ideas. There will be less ambiguity if the designer follows the emotional intent of the user. But the emotional experience of the users is dependent on various factors on which investigation can be done to any extent for betterment of understanding ‘user desires’.

The designer will develop the product form according to the visual which is matching the emotional requirement perceived in the user’s mind. This will help in generating customized product forms from the photographs/visuals provided by the user.

User’s aspirations will be extracted with this kind of qualitative methodology and designer will get a foothold for the directions in the form generation. Further research in this direction enable people involved in the design practice to tap deeper into users emotional experience towards visual form, leading to more defined decision-making in the design process.

References

- [1] *Kensei* (2000), Seung Hee Lee , Evaluation of matching 2D to 3D images extracted by observation of 3D objects, Institute of Art and Design, University of Tsukuba.
- [2] Seung Hee Lee(2000), Extending of Design approach based on *Kensei* by Dynamic Manipulation of 3D Objects, Delft University of Technology, Pieter Jan Stappers, Delft University of Technology, Akira Harada, University of Tsukuba
- [3] P.M.A Desmet, Emotion Through Expression–Designing mobile telephones with an emotional fit ,Delft University of Technology, the Netherlands, Department of Industrial Design.
- [4] Oscar person(2002), Understanding emotional response to product form-Relationship between emotion profiles and product format, Department of Product Design, Norwegian University of Science and Technology.
- [5] Pieter Desmet(2000) , Designing emotions, Delft University of Technology, the Netherlands, Department of Industrial Design.
- [6] Donald A.Norman(2004), Emotional Design, Why we love (or hate) everyday things ,New York
- [8] Katja battarbee,Tuuli Mattelmäki, Design for User Experience, Department of Product and strategic Design , Finland
- [9] Robert Cox, Value of Emotion in Communication-Implications for User Centered Design, School of Information Systems, University of Tasmania, Australia

[10] Theodore levitt, Marketing intangible products and product tangibles, Aesthetic implications of form, Graham collier

[11] Gaver et al. 1999, Wensveen (1999), The Cultural Probes research

[12] Dr. C.J.Overbeeke, Dr. P.Hekkert, (July 1999), Proceedings of first international conference on design and emotion

Annexure

***Kensei* evaluation of matching 2D to 3D images extracted be observation of 3D objects**

Seung Hee Lee

Institute of Art and Design, University of Tsukuba

Extending of Design approach based on *Kensei* by Dynamic Manipulation of 3D Objects

Seung Hee Lee, Delft University of Technology

Pieter Jan Stappers, Delft University of Technology

Akira Harada, University of Tsukuba

Marketing intangible products and product tangibles

Theodore Levitt

Understanding emotional response to product form

- Relationship between emotion profiles and product format

Oscar Peron

Department of Product Design

Norwegian University of Science and Technology.

Emotional Design

- Why we love (or hate) everyday things

Donald A. Norman

New York