

A STUDY OF CONSUMERS' EMOTIONAL RESPONSES TOWARDS
BRANDS AND BRANDED PRODUCTS

A THESIS SUBMITTED TO THE
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

ARMAĞAN KARAHANOĞLU

IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN
INDUSTRIAL DESIGN

JULY 2008

Approval of the thesis:

**A STUDY OF CONSUMERS' EMOTIONAL RESPONSES TOWARDS
BRANDS AND BRANDED PRODUCTS**

submitted by **ARMAĞAN KARAHANOĞLU** in partial fulfillment of the requirements for
the degree of **Master of Science in Industrial Design Department, Middle East
Technical University by,**

Prof. Dr. Canan Özgen
Dean, **Graduate School of Natural and Applied Sciences** _____

Assist. Prof. Dr. Bahar Şener-Pedgley
Head of Department, **Dept. of Industrial Design, METU** _____

Assist. Prof. Dr. Bahar Şener-Pedgley
Supervisor, **Dept. of Industrial Design, METU** _____

Examining Committee Members:

Assist. Prof. Dr. Naz Börekçi
Dept. of Industrial Design, METU _____

Assist. Prof. Dr. Bahar Şener-Pedgley
Dept. of Industrial Design, METU _____

Inst. Dr. Canan E. Ünlü
Dept. of Industrial Design, METU _____

Inst. Figen Işık Tüneri
Dept. of Industrial Design, METU _____

M.S. Burcu Karakaya
Cybersoft Information Technologies Ltd. Şti. _____

Date: July 18th, 2008

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name: Armağan Karahanoğlu

Signature:

ABSTRACT

A STUDY OF CONSUMERS' EMOTIONAL RESPONSES TOWARDS BRANDS AND BRANDED PRODUCTS

Karahanoğlu, Armağan

M.S. Department of Industrial Design

Supervisor: Assist. Prof. Dr. Bahar Şener-Pedgley

July 2008, 157 Pages

Product experience is a multi-dimensional user-product interaction, which includes the user's emotional aspects. Emotional experience is a component of product experience which comprises the emotions elicited by the brands and products of the brand. This study investigates the relationship between brand and product emotions and the qualities of products that evoke these emotions.

The presented study was mainly based on literature review and empirical study. First, psychological background of emotions was reviewed to explain the process underlying these emotions. Then, emotions of users were investigated from design and marketing perspectives. The literature review was then supported by the data collected through the findings of the empirical study.

The empirical study aimed at examining the relationship between emotions of users, product qualities and brand of the product. One product of five different brands were shown to the participants and each participant was asked to rate their emotions. Each participant was shown one set of products (i.e. iron), and each set was consisted of original (O), mixed (M) brand names or no brand name (N). The results of 105 participants were evaluated using statistical analyses and content analyses methods. The data analyses were undertaken separately for each of the product groups, with the findings for each group then being cross-compared using SPSS software. The aim was to

elicit information on possible relations between brands that form certain impressions of, and emotions towards products bearing their brand name, plus the change in negative/positive emotions associated with each iron across the three groups. The results give valuable insights into the practical impact of branding, product identity and product emotions. The study also extends the understanding of how branding affects people's emotional responses to consumer products.

Keywords: product experience, emotional branding, product emotions, brand emotions

ÖZ

KULLANICILARIN MARKALARA VE MARKALI ÜRÜNLERİNE OLAN DUYGUSAL YAKLAŞIMI ÜZERİNE BİR ÇALIŞMA

Karahanoğlu, Armağan
M.S. Endüstri Ürünleri Tasarımı
Tez Yöneticisi: Y. Doç. Dr. Bahar Şener-Pedgley

Temmuz 2008, 157 Sayfa

Ürün deneyimi, kullanıcının duygusal kullanımlarını içeren, çok boyutlu bir ürün-kullanıcı etkileşimidir. Duygusal deneyim de ürün deneyimini içeren, markaların ve bu markaların ürünlerinin uyandırdığı duyguları kapsamaktadır.

Bu tez temel olarak literatür taraması ve deneysel çalışma üzerine kurulmuştur. Çalışma, marka ve ürün duygularının arasındaki ilişkiyi ve bu duyguları uyandıran ürün özelliklerini araştırmaktadır. Çalışmada öncelikli olarak duygu süreçlerini açıklamak üzere duyguların psikolojik altyapısına değinilmektedir. Ardından, kullanıcı duyguları tasarım ve pazarlama bakış açılarından incelenir. Bu tez, deneysel çalışmanın sırasında toplanan bilgi ile desteklenir.

Deneysel çalışma kullanıcı duyguları, ürün özellikleri ve markalar arasındaki ilişkiyi açıklar. Bu çalışmada 5 markanın birer ürünü (bu çalışmada ütü) kullanıcıları gösterilmiş ve duygularını belirtmeleri istenmiştir. Her kullanıcıya, daha önceden oluşturulan doğru markalı (O), karıştırılmış markalı (M) ve markasız (N) ürünler gösterilmiştir. 105 katılımcının değerlendirmesi istatistik ve içerik analizleri ile değerlendirilmiştir. Toplanan veriler, SPSS programı kullanılarak her ürün grubu için ayrı ayrı değerlendirilmiş, daha sonra gruplar kendi içlerinde değerlendirilmiştir. Amaç, markalara olan izlenimlerle, ürünlere olan duyguların arasında var olan olası ilişkileri ve pozitif/negatif duygulardaki değişimleri incelemektir. Araştırma sonuçları markalaşma, ürün kimliği ve ürün duyguları hakkında değerli bilgiler vermektedir. Bu çalışma ayrıca

markaların ürünlere olan duygusal tepkileri nasıl etkilediđi konusunda geniş bir anlayış oluşturmaktadır.

Anahtar Kelimeler: ürün deneyimi, duygusal markalaşma, ürün duyguları, marka duyguları

To My Dad

ACKNOWLEDGEMENTS

Firstly, I would like to express my deepest thanks to my thesis supervisor Assist. Prof. Dr. Bahar Şener-Pedgley, for her guidance and attention for the completion of this thesis. I was inspired by her energy and patience, and I felt confidence of her wise supervision she has provided me all the way through my entire Master's studies.

I would like to thank to Dr. Canan E. Ünlü, for her patience in providing feedback on several parts of this work by commenting, criticizing, and contributing ideas. She also made me smile in depressing moments of this thesis.

I felt warm support of my dearest mom, Saime Karahanoğlu and my uncle İbrahim Aykut; their endless love and support were with me throughout this thesis. Also I would like to thank to all my extended family for their invaluable support throughout the thesis.

I would like to thank to all the friends, who participated in my empirical study. I gratefully thank all of them for their participation and contribution.

The help and guidance of members of the Anadolu Araştırma, their comments and friendship is deeply appreciated. I would like to thank especially to Cenk Balkan, for his immense help and feedback, and also enthusiastic support in making this thesis possible.

My best friends Özlem Tunçbilek, Nazlı Cila and Senem Tural were always with me in good and bad times; their support and comments certainly had a great influence on me. I also thank to the rest of my friends, Ece Gürakar, Diler Şimşek, Aybike Tamer, Sözüm Doğan, Cem Altıbaş, Mehmet Turhan, Seda Özçetin and Burcu Karakaya for the good times they provided me throughout this thesis.

Lastly, to my beloved Hakan Kuru for his endless love and support, for the input and moral support he provided throughout my work. He always believed that I can accomplish this study, and encouraged me throughout my graduation study.

TABLE OF CONTENTS

ABSTRACT.....	iv
ÖZ.....	vi
DEDICATION	viii
ACKNOWLEDGEMENTS.....	ix
TABLE OF CONTENTS.....	xi
LIST OF TABLES.....	xiv
LIST OF FIGURES.....	xvi

CHAPTER

1. INTRODUCTION	1
1.1 Problem Statement.....	1
1.2 Aim of the Study	2
1.3 Structure of Thesis.....	3
2. LITERATURE REVIEW	5
2.1 Study of Emotions from Psychology Perspective	6
2.1.1 Definitions of Emotions	6
2.1.2 Classification of Emotions	7
2.1.3 Alternative Models to Basic Emotions	10
2.1.4 Theories of Emotions.....	12
2.1.5 Measuring Emotions.....	15
2.2 User Emotions from Design Perspective	17
2.2.1 Product Experience	17
2.2.2 Product Emotions	21
2.2.3 Measuring Product Emotions	25
2.3 User Emotions from Marketing Perspective	28
2.3.1 Brand and Branding.....	28
2.3.2 Consumer Behavior and Brand Experience	31
2.3.3 Sensory Branding / Emotional Branding	35
2.3.4 Measuring Consumer Emotions	38
2.4 Chapter Discussion	40

3. DESIGN AND CONDUCT OF THE STUDY	43
3.1 Aim of the Empirical Study	43
3.2 Methodology	45
3.2.1 Selection of Product	45
3.2.2 Selection of Brands.....	46
3.2.3 Selection of Participants.....	49
3.2.4 Decision on Emotion Scales.....	50
3.2.6 Venue and Equipment.....	51
3.2.7 Data Collection Methodology.....	51
3.2.7.1 Questionnaire.....	52
3.2.7.2 Post-Interview	53
3.2.7.3 Study Procedure	53
4. RESULTS AND ANALYSIS	55
4.1 Data Analyses Procedure.....	55
4.1.1 Statistical Analyses	56
4.1.2 Graphs Analysis	57
4.1.3 Content Analysis.....	58
4.2 Brand Awareness.....	59
4.3 Emotion Evaluation.....	60
4.3.1 Categorization of Emotions	60
4.3.2 Emotions towards Products	62
4.3.3 Product Specific Results	65
4.3.3.1 Analysis of Iron-1 (Arzum).....	65
4.3.3.2 Analysis of Iron-2 (Braun).....	70
4.3.3.3 Analysis of Iron-3 (Philips).....	75
4.3.3.4 Analysis of Iron-4 (Sinbo)	79
4.3.3.5 Analysis of Iron-5 (Tefal)	83
4.3.4 Analysis of Emotions within Groups.....	86
4.3.4.1 Analysis of O (Irons with Original Brand Names) Set	86
4.3.4.2 Analysis of M (Irons with Mixed Brands Names) Set	88
4.3.4.3 Analysis of N (Irons with No Brand Name) Set.....	90
4.4 Discussion and Conclusions	96
5. CONCLUSIONS.....	100
5.1 State of the Literature	100

5.2 Research Questions Revisited.....	102
5.3 Limitations of the Study.....	108
5.4 Further Research	108
REFERENCES	110
APPENDICES	121

LIST OF TABLES

Figure 1.1 Diagram Representation of the Thesis Structure	4
Figure 2.1 Core Affect Theory.....	11
Figure 2.2 Watson and Tellegen Model (1985)	11
Figure 2.3 Larsen and Diener Model (1992)	12
Figure 2.4 Dynamics of Interaction (Forlizzi and Batterbee, 2004)	19
Figure 2.5 Framework of Product Experience (Desmet & Hekkert, 2007)	20
Figure 2.6 Basic Model of Product Emotions (Desmet, 2002).....	22
Figure 2.7 Levels of Emotional Response to Products (Norman and Ortony, 2003).....	23
Figure 2.8 Mood Board Examples (Lucero and Martens 2005).....	26
Figure 2.9 Emocards (Desmet <i>et al.</i> 2001)	27
Figure 2.10 Brand Anatomy (Laituri, in Cuffaro, 2006)	30
Figure 2.11 Levels of Emotional Branding (reproduced from Gobe, 2007)	37
Figure 2.12 Emoti*Scape	39
Figure 2.13 Relationship between Brand and Product Emotions	41
Figure 3.1 Iron 1: Arzum	47
Figure 3.2 Iron 2: Braun	48
Figure 3.3 Iron 3: Philips	48
Figure 3.4 Iron 4: Sinbo.....	48
Figure 3.5 Iron 5: Tefal.....	49
Figure 4.1 Brand Awareness Results	59
Figure 4.2 Two Dimensional Emotion Clusters.....	61
Figure 4.3 Dendogram of Emotions.....	61
Figure 4.4 Mean Values of positive emotions	62
Figure 4.5 Mean Values of negative emotions.....	64
Figure 4.6 Analyses of Emotions towards Iron-1 (Arzum; Sinbo brand in M set)	67
Figure 4.7 Analyses of Emotions towards Iron-2 (Braun; Philips brand in M set).....	72
Figure 4.8 Analyses of Emotions towards Iron-3 (Philips; Tefal brand in M set)	76
Figure 4.9 Analyses of Emotions towards Iron-4 (Sinbo; Braun brand in M set)	80
Figure 4.10 Analyses of emotions towards Iron-5 (Tefal; Arzum brand in M set)	84

Figure 4.11 Analyses of Emotions within Original Set	87
Figure 4.12 Analyses of Emotions within Mixed Set	89
Figure 4.13 Analysis of Emotions within None Set	91
Figure 4.14 Relationship between brand and product emotions in this study	98
Figure 5.1 Research Questions and Related Chapters	102

LIST OF FIGURES

Table 2.1 Definitions of Basic Emotions According to Various Sources in Literature	8
Table 2.2 Sheth's Consumer Motives	32
Table 2.3 Public-Private and Luxury-Necessity Dimensions of Purchase Decisions.....	33
Table 3.1 Potential Product Groups	46
Table 3.2 Distribution of brand names within product sets.....	49
Table 3.3 Characteristics of the Participants (between the three groups)	50
Table 4.1 Emotion Graph Analyses.....	58
Table 4.2 Categorization of participants' statements in relation to product qualities ..	59
Table 4.3 Number of Participants (over 35) talked about the qualities of Iron 1	68
Table 4.4 Number of Participants (over 35) talked about the qualities of Iron 2	73
Table 4.5 Number of Participants (over 35) talked about the qualities of Iron 3	77
Table 4.6 Number of Participants (over 35) talked about the qualities of Iron 4	81
Table 4.7 Number of Participants (over 35) talked about the qualities of Iron 5	85
Table 4.8 The Levels of Emotions in relation to Iron Sets	93
Table 4.9 Degree of Influence of Emotions for each Product	98
Table A.1 Properties of Participants.....	121
Table B.1 Order of Products in Product Sets	124
Table D.1 Reliability Statistics for Iron-1	131
Table D.2 Item-Total Statistics for Iron-1	131
Table D.3 Reliability Statistics for Iron-2	132
Table D.4 Item-Total Statistics for Iron-2	132
Table D.5 Reliability Statistics for Iron-3	133
Table D.6 Item-Total Statistics for Iron-3	133
Table D.7 Reliability Statistics for Iron-4	134
Table D.8 Item-Total Statistics for Iron-4	134
Table D.9 Reliability Statistics for Iron-5	135
Table D.10 Item-Total Statistics for Iron-5	135
Table E.1 Descriptive Statistics of Brands.....	136
Table E.2 Analyses of Iron-1	137

Table E.3 Analyses of Iron-2	140
Table E.4 Analyses of Iron-3	143
Table E.5 Analyses of Iron-4	146
Table E.6 Analyses of Iron-5	149
Table E.7 Mean Values of Positive Emotions	152
Table E.8 Mean Values of Negative Emotions.....	152
Table F.1 Keywords and Keyword Groups Mentioned for Iron-1.....	153
Table F.2 Keywords and Keyword Groups Mentioned for Iron-2.....	154
Table F.3 Keywords and Keyword Groups Mentioned for Iron-3.....	155
Table F.4 Keywords and Keyword Groups Mentioned for Iron-4.....	156
Table F.5 Keywords and Keyword Groups Mentioned for Iron-5.....	157

CHAPTER 1

INTRODUCTION

1.1 Problem Statement

In the 19th century, two merchants who provided same packaged goods, needed to differentiate their products from each other. As a result, they gave names to their products which is known as the first attempt to use brand names. They probably did not predict that, what they did to sell the product will become a part of marketing and design studies one day.

Today, modern life brings new kinds of products with new product languages into people's lives under different brand names. These new products bring with them new kinds of product experience that may be adventurous, surprising or dreadful. Consequently, a more comprehensive understanding of product experience has been constituted and its scope has been widened into understanding users' emotional needs together with functional and social needs. This new understanding is associated with positive, experiential and emotional usage, rather than just functional. Therefore, the users' emotional experience with the product attracted the attention of many researchers in the field of both design and marketing.

When the number of related conferences, research journals with special issues about the subjects, and the emerging interest in companies and universities are investigated in the areas of emotional design and emotional branding, it can be observed that the number of research studies, hence the researchers, interested in emotional experience is increased. These researchers, from marketing and design research, deal with the emotional experience of users from their own perspectives. Market researchers are interested in the emotions of consumers, within different components of the brand experience, such as products of the brand, the retail environments, and advertisements which results in the experience of the brands. On the other hand, design researchers

investigate the emotional experience of the users with the product, within the product experience context. Design researchers are also interested in how users interact with the product and how they react emotionally. Despite the research efforts, there still exists a need for explaining the relationship of users' emotional responses towards brands and products of these brands as both design and marketing literatures deal with emotions from their own perspectives without explaining the relationships with other literature.

The literature supplies a theoretical base of emotional experiences including brand and product emotions. The importance of consumer emotions is stated in design and marketing literatures separately. Nonetheless, these theoretical bases are not investigated together to supply a coherent understanding of their relationships. Therefore, it is necessary to take the analysis of emotions in a holistic way to reveal its various dimensions which is believed to contribute to rich and engaging emotional product and brands experience.

1.2 Aim of the Study

This study aims to clarify the emotion related issues through the context of experience of users with the consumer products, including emotional responses of users towards products and brands. It aims to investigate the dimensions of emotional experience of users within product and brand experience contexts in which the theoretical bases of design and marketing literatures are combined, and a holistic understanding of these issues are presented.

The efforts have been made to present the relationship between brand emotions and product emotions. To understand these, data from the literature are presented. However, as the literature lacks comprehensive work analyzing the connection of the interrelation of brand and product, the literature review is supported with a complementary empirical study.

Accordingly, main and supporting research questions are as follows.

- What is the relationship between the emotional responses of users towards products and brands of these products?

- What are the theories and structures behind the elicitation of the emotions?
- How are emotions of users discussed in design and marketing literature?
- How does the brand of the product affect the product emotions?
- What is the relationship between brand awareness and user's emotions towards products of these brands?
- Which qualities of products are related to the brand and product emotions?

To answer these questions, the meaning and definitions of emotions of users from psychology, design and marketing perspectives are examined. Product and brand related dimensions of emotional responses will be presented. To complement the findings of the literature, an empirical study on the emotional responses of users towards brands and products of these brands is conducted, and the results are presented.

1.3 Structure of Thesis

The thesis consists of five main chapters. Figure 1 shows the diagram representation of the thesis structure.

Chapter 1 presents the topic of the thesis and the research questions to be answered.

In the Chapter 2, dimensions of user emotions towards consumer products are explored, which consists of four main parts. The first part focuses on emotions, and summarizes the definitions, theories and methods of measuring emotions in psychology design and marketing literatures. The second part explains product experience and product emotions together with product emotion measuring methods. The third part explores experience and brand emotions with a brief summary of measuring methods used in marketing literature. The chapter then concludes with discussion on the three literatures.

Chapter 3, covers the design and conduct of the empirical study. Chapter 4 presents the results and analysis of the study together with general discussion on the outcomes of the study.

The thesis concludes with a final chapter, Chapter 5, which is summarizing and evaluating the findings of the preceding chapters, together with suggestions for further studies.

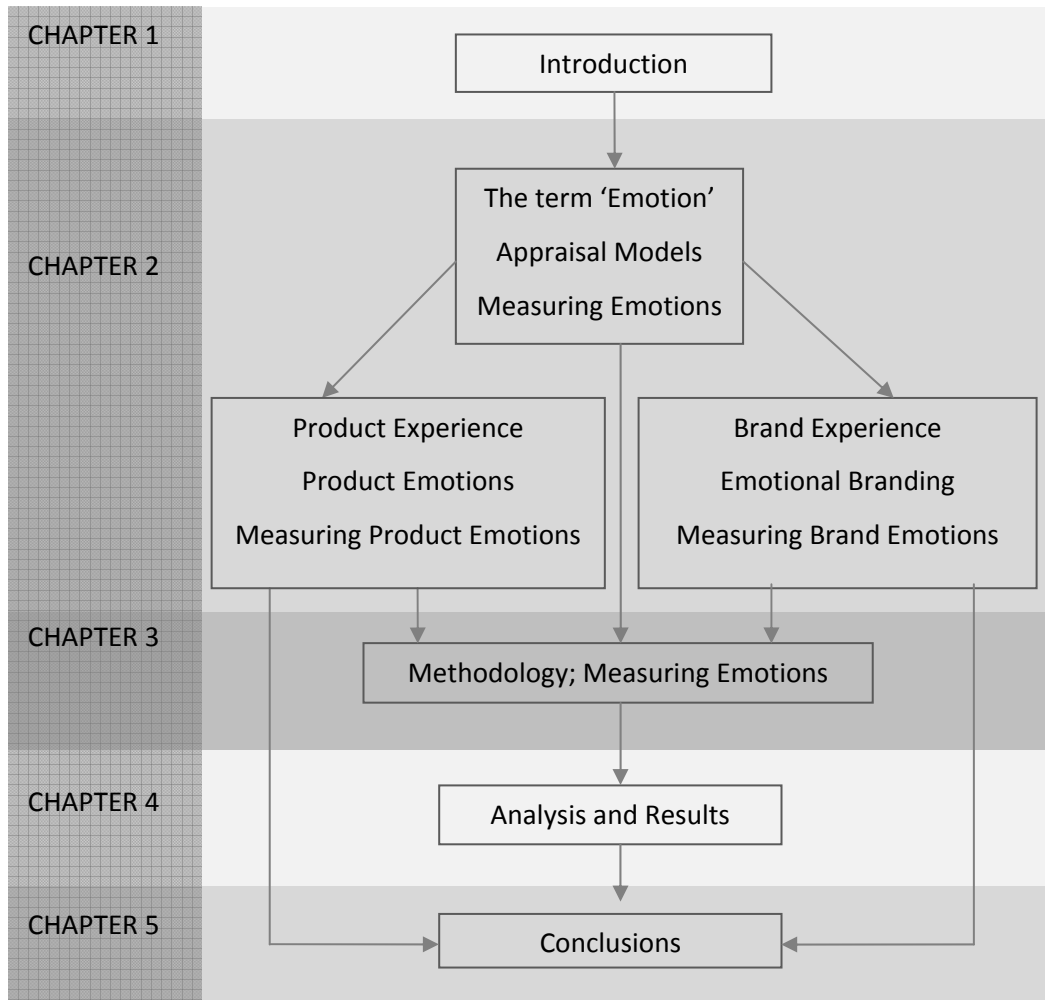


Figure 1.1 Diagram-Representation of the Thesis Structure

CHAPTER 2

LITERATURE REVIEW

This chapter consists of the review of emotions. Through the chapter, emotions are studied within three literatures: psychology, marketing and design. The first section focuses on emotions from the psychologists' perspective and tries to conceptualize what emotions are and how they are evoked. In the second section, emotions of users will be analyzed within the design literature, in which researchers deal with how the emotions are elicited by a product. The third section consists of the analysis of emotions from the marketing perspective. This part will explain how the marketing literature deals with emotions of users. In the last section, psychology, design and marketing perspectives are summarized and discussed.

Psychology researchers study on what emotions are and how people react towards objects and events emotionally. Although psychology does not research emotions towards brands and products specifically, it explains the reasons behind emotions and gives a valuable background on the topic.

Understanding the emotions towards products and brands cannot be totally understood if the marketing perspective is excluded. However, both design and marketing literatures have differences in how they define the person who uses a product and the experience the person has with the product. The marketing perspective does not mention 'user' or 'usage' as the designers do, rather 'consumer' and 'purchase'.

Marketing strategists deal with the experience that consumers have during the purchase and after-purchase of a product or a service. What they are interested in is the way consumers' repurchase' the brand which will be achieved by purchasing the other products of the brand. This leads market researchers to understand the

underlying reasons and to analyze consumer behavior and consumer satisfaction. Market research is the way to understand consumer needs and decide on the product design, price, distribution and promotion. On the other hand, what designers focus on is the experience that users have during the usage of a product. For this reason, product language, the decisions on the form of the product and the usage scenarios of the products become important. Where these two different perspectives overlap is both that designers and marketers deal with the *emotions* of 'users' - or 'consumers'.

2.1 Study of Emotions from Psychology Perspective

Emotions play an important role in people's lives as they guide, enrich and enable life; provide meaning to everyday existence (Cacioppo et al., 2001, in Desmet, 2002). It is also acknowledged that cultural artifacts like art elicit a substantial part of people's emotions (Desmet, 2002). As the emotions of users towards products and brands will be discussed and analyzed throughout the study, understanding emotions and how they are evoked become important to discuss. In the following section, definitions of emotions, theories of emotions, and how they are evoked according to these theories will be examined.

2.1.1 Definitions of Emotions

The question 'what is emotion' has been asked and still remains unanswered (Russell, 2003; Kalat and Shiota 2007), since the very beginning of the introduction of the term 'emotion' into the literature by James (1880, in Kalat and Shiota,2007). The term emotion has been the focus of psychological studies and these studies have attempted to understand what emotion is and how they are evoked. As a result various definitions of emotions have been suggested and different theories have been discussed by different psychologists.

Emotion is defined as a very complex term that has no single universally accepted definition. First definitions of the emotion appeared in domains of religion and philosophy. Philosophers like Aristotle, Descartes and Kant emphasized emotions and classified these emotions in the forms of discrete emotions (Dormann,2003). Emotions are known as complex reactions that engage both our minds and our bodies (Dormann, 2003), and are the states of emotions or as positive or negative affective feeling states

(Fridja, 1988, in Dormann 2003). On the other hand, Ortony et al., (1988) define emotions as “valenced reactions to events, agents, or objects, with their particular nature being determined by the way in which the eliciting situation is construed” (p. 13). Similarly, Kalat and Shiota (2007) define emotions as reactions to something outside the body in the social environment and require processing complex information; emotions are complex evaluations of events and their meaning.

2.1.2 Classification of Emotions

Understanding emotion is as complex as defining them. In understanding what emotions are, psychologists suggest that one way to classify emotions is to separate them as positive and negative emotions. However, in this way, the study of positive and negative emotions creates a finite number of irreducible emotional states and this way individuals experience discrete highly differentiated emotional states (Niedenthal et al, 2006). Therefore, rather than classifying emotions into positive and negative, classifying emotions into primary (basic) and secondary emotions at first was suggested to understand emotions.

Before classifying emotions, psychologists debated on which states can be called as emotions. Kalat and Shiota (2007) state that nearly all psychologists consider *joy, sadness, fear and anger* are as good examples of emotions. In some sources, *disgust, contempt and surprise* are also included as much as *hope, embarrassment, shame, pride, love, hate, jealousy, interest, confusion, concentration, worry, contentment and awe*.

Another debate on the classification of emotions is that whether emotions should be classified or not. Ekman (1999) in his studies shows that at least some emotions are primary and innate in all human beings. Psychologists ask whether all emotional experiences involve combinations of a few, discrete units (Kalat and Shiota, 2007). The authors stated that different psychologists list a limited number of ‘basic emotions’ that are fundamentally distinct from one another and the idea of basic emotions has been used in literature in at least two ways. One is defining basic emotions that are fundamentals of other emotions and suggests that more complex emotions are combinations of these basic emotions (Ortony and Turner, 1990). The other way claims

that basic emotions have biological basis and encoded in genes (Ekman, 1999). As a result, different emotions were listed as basic by different psychologists and Ortony and Turner (1990) made a survey on these emotions which can be studied in tabularized form in Table 2.1.

Table 2. 1 Definitions of Basic Emotions According to Various Sources in Literature (Ortony and Turner, 1990)

<i>Reference (in chronological order)</i>	Basic emotions
James (1884)	fear, grief, love, rage
McDougall (1926)	anger, disgust, elation, fear, subjection, tender-emotion, wonder
Watson (1930)	fear, love, rage
Arnold (1960)	anger, aversion, courage, dejection, desire, despair, fear, hate, hope, love, sadness
Mowrer (1960)	pain, pleasure
Izard (1971)	anger, contempt, disgust, distress, fear, guilt, interest, joy, shame, surprise
Plutchik (1980)	acceptance, anger, anticipation, disgust, joy, fear, sadness, surprise
Ekman, Friesen, and Ellsworth (1982)	anger, disgust, fear, joy, sadness, surprise
Gray (1982)	rage and terror, anxiety, joy
Panksepp (1982)	expectancy, fear, rage, panic
Tomkins (1984)	anger, interest, contempt, disgust, distress, fear, joy, shame, surprise
Weiner & Graham (1984)	happiness, sadness
Frijda (personal communication, September 8, 1986)	desire, happiness, interest, surprise, wonder, sorrow
Oatley & Johnson-Laird (1987)	anger, disgust, anxiety, happiness, sadness

As can be seen in Table 2.1, although there are commonalities in the classification of certain emotions as basic, there has not been a consensus on the number of emotions that can be classified as basic as well as the reasons behind this classification. They do not agree on how many emotions are basic, which emotions are basic and why they are basic (Ortony and Turner, 1990). The authors state two reasons behind proposing 'basic emotions'. The first reason is to conceptualize some routine observations about emotions which include the facet that some emotions are common in all cultures and can be recognizable by facial expressions. The second reason is the irreducible number of emotions. Authors think that at least some of these emotions should be listed as basic and the other emotions should be built on them. These two reasons have two different primitives (p.319); biological and psychological. Biologically based views of basic emotions argue that emotions are biologically given to human beings. Therefore, some of them are sensed universally and reflected by facial expressions. Psychological based views, on the other hand, argue that these emotions have elementary eliciting conditions and they do not constitute emotions.

While psychologists do not agree on which emotions are basic and what evidence would be decisive, Kalat and Shiota (2007) define five criteria that summarize different views, for an emotion to be 'basic'. Their summary is useful for overviewing the debate. Accordingly, the basic emotions should:

- be universal; the emotion should occur in all societies in nearly all people,
- facilitate a functional response to a specific, prototypical life event; the emotion should be shared and felt by other people,
- be evident early in life,
- be expressed in a way; voice or face,
- have its own physiological basis; an activity in the brain or automatic nervous system (Kalat and Shiota, 2007).

To sum up, basic emotions come from the early years of human kind; have physiological basis; and are felt by all the people from different societies and expressed by voice or by facial expressions. However, basic emotions do not answer which states are emotions, as different perspectives give different names, and there still remains a gap

between the lists of researchers. This disagreement leads psychologists to suggest other alternative models to basic emotions.

2.1.3 Alternative Models to Basic Emotions

Alternative models to basic emotions cover studies that explain the structure of emotions in dimensional accounts. Several related theories describe emotions as a point on a continuous plane; others describe emotions as positions of emotions in a number of dimensions. Amongst these models proposed by Russell (1980, in Niedenthal *et al.*, 2006), Watson and Tellegen (1985, in Niedenthal et al, 2006) and Larsen and Diener (1992, in Niedenthal et al, 2006) will be discussed. These three sources are important as they all deal with emotions in two dimensional structures which explain that the emotions are outcomes of combinations of activities in these two dimensions (as will be explained in Figures 2.1 to 2.3). These models are important as they give bases for understanding how emotions are evoked.

The first model is based on the 'Core affect' theory, introduced by Russell (1980). This model combines the affect dimension with physiological arousal into circular two-dimensional model (Figure 2.1). Russell states that at a moment, conscious experience is a blend of two dimensions (pleasure-displeasure and activation-deactivation), which is described as a single point on the table. The emotion elicited in the intersection of two dimensions, is related to the persons' current condition, mobilization and energy. For example, pride can be defined as feeling good about oneself. Here, 'feeling good' is core affect and about oneself is an additional (cognitive component). This emotion is placed on the area of the intersection of pleasure and activation. Russell (2003) defines this theory as simple, primitive and universal which can exist without being labeled, interpreted or attributed to any cause.

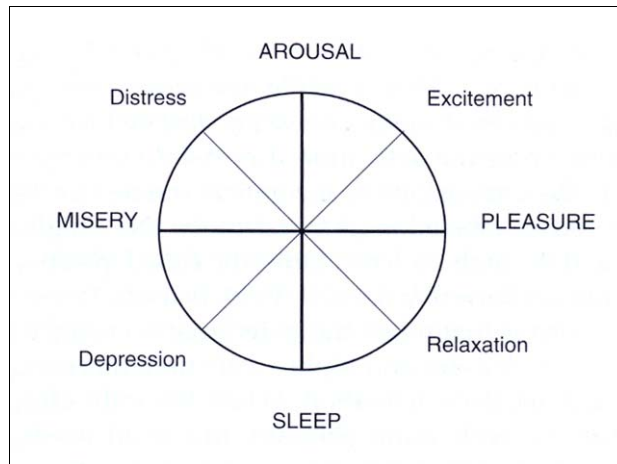


Figure 2. 1 Core Affect Theory (Russell, 1980 in Niedenthal *et al.* 2006)

The second model, shown in Figure 2.2, has similarities with Russell’s model in which emotions are combinations of 2-dimensions and based on pleasure-displeasure and activation-deactivation dimensions. While in Russell’s core affect model a person cannot feel positive and negative emotions at the same time, in Watson and Tellegen’s (1985) model, an emotion is a combination of positive and negative emotion. In this model, positive and negative emotions differ from each other and can be felt at the same time.

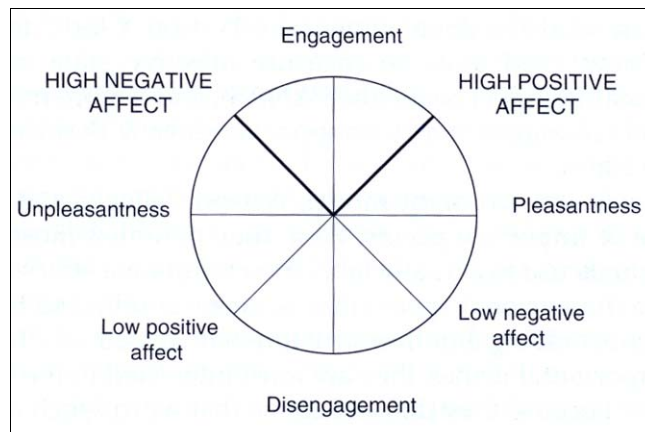


Figure 2. 2 Watson and Tellegen Model (1985, in Niedenthal *et al.* 2006)

Similar to Russell’s model, in Larsen and Diener’s model, as illustrated in Figure 2.3, activation is bipolar meaning that the presence of one emotion is related to the absence of the other. Unlike Watson and Tellegen’s model, positive and negative

feelings cannot be felt at the same time. However, activation and deactivation of a given emotional state is also bipolar which is independent in Russell's model.

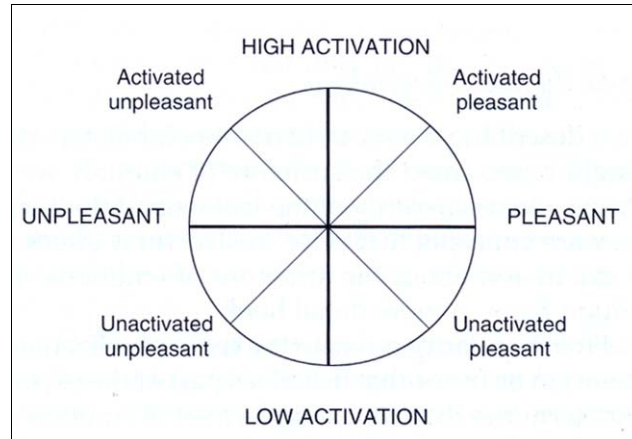


Figure 2. 3 Larsen and Diener Model (1992, in Niedenthal *et al.* 2006)

2.1.4 Theories of Emotions

This section explains how emotions are evoked in relation to main theories in literature. Theories of emotions become important as they visualize why there are different definitions. These theories try to find out the causes of emotions, explain the processes that emotions occur, the order of the components that elicit emotions, and the relationship between these components. The following are major theories of emotions found in the literature; Jamesian Theories, Evolutionary Theories, Social Constructionists Theories and Cognitive-Appraisal Theories. While studying these theories, it was taken into consideration that within these theories, the literature on product emotions is mostly based on cognitive-appraisal theories. These theories are explained in more detail in following sections.

Jamesian Theories

As stated before, William James is considered as the ancestor of psychology as he first asked the question "what is emotion?". In his studies, he stated that emotions are the labels we give to the way the body reacts to certain situations (James 1884, 1894, in Kalat and Shiota, 2007). He defines the process of emotion in the way that there is an eliciting event which causes automatic nervous system (ANS) activity, that result in a

subjective state. James uses an example to explain this theory in which a person notices that he is escaping from a bear, therefore he feels frightened. However, these theories are criticized in the sense that why people run away is not the bear itself but the perception of the entire situation (e.g. bearing coming to the person).

Evolutionary Theories

This theory is based on works of Darwin, as he assumes that emotions are based on biology and he links the emotions to biological adaptation in the distant past. According to Darwin (1872, in Niedenthal et al, 2006), emotions are appropriate problem-solving responses to situations posed by the environment and they increase the chances of survival. This theory is based on an eliciting event which results in an emotion to evoke as results of automatic nervous system activity, expressive behavior and subjective state. The developed models of these theories claim that emotions are genetically coded and they are triggered by objects or events that are evolutionary recognizable as they are relevant to biology or adaptive problems (Cosmides and Tooby, 2000, in Niedenthal et al, 2006).

Social Constructionists Theories

These theories differ from the first two theories as constructionists think that emotional feelings differ as the societies change. The constructionists argue that different components of emotions are separate from each other and they do not accompany to all emotional responses (Niedenthal *et al.* 2006, p.36). Social constructionist theories reject the biological realities and consider emotions as products of a given culture, constructed *by* the culture, and *for* the culture. The strongest argument that these theorists make is that words describing emotions change from society to society and many English words do not exist in other societies, which is a result of the talking about the emotions of the societies. For example the word 'laugh' has different meanings in Chinese culture. As a result, the emotional statements elicited by an event or object are related to the society that the person lives in.

Cognitive-appraisal Theories

Cognitive-appraisal theories link the emotions to the immediate cognitive processes of evaluation of meaning, causal attribution and assessment of coping possibilities (Niedenthal *et al.*, 2006; p.13). The appraisal process explains how the emotions are elicited and according to these theories without appraisal there would be no emotion. The early studies of these theories were carried out by Schachter and Singer (1962; in Niedenthal *et al.*, 2006) in which the emotions believed to be differentiated by cognition. These theories claim that emotions are elicited with the combination of ANS activity, expressive behavior and subjective state, which are outcomes of cognitive appraisal caused by eliciting event. The emotion starts with an ANS activity which results in eliciting event. The event causes the cognitive appraisal, which results in expressive behavior and subjective state. According to these theories, the arousal and other actions that are part of any emotion are essential for determining how strong the emotional feeling will be, but they do not identify emotion. An important aspect of these theories is that emotions are elicited as a result of one's attachment of meanings to events (Desmet, 2002). Therefore, these theories are mostly taken as bases in design literature for explaining product emotions.

As stated above, cognitive-appraisal theories differ in the causes of the elicitation of an emotion and how they are reflected. In the evolutionary approach, human beings are biologically prepared to respond to specific objects and events with specific emotional responses. In the social constructionist approach, emotions are constructed by society, and should be evaluated within linguistic and social contexts. In the cognitive approach, emotions are elicited by the processes of evaluation that link events in the environment to the ongoing.

The definition by Keltner and Gross (1999, p. 468) is worth mentioning hence since it properly summarizes the concepts that have been discussed so far. That is; "Emotions are episodic, relatively short-term, biologically-based patterns of perception, experience, physiology, action and communication that occur in response to specific physical and social changes and opportunities." (p.468)

To sum up, for psychologists, emotions are complex reactions of people to understand. Efforts to make a common defining of emotions lead psychologists to classify emotions for conceptualizing them. These classifications also resulted in different methods to measure emotions.

2.1.5 Measuring Emotions

As the approaches and theories differ in the definition of how emotional responses are evoked, the proposed methods for measuring emotions change in the same way (Niedenthal *et al.* 2006; Kalat and Shiota, 2007). In relation to the definitions of emotions, it is possible to observe four perspectives:

1. Emotions are feeling of states; they are referred as conscious and individuals can reflect on and quantify them. Therefore, *psychologists use questionnaires to measure emotions in scales* (Niedenthal *et al.*, 2006).
2. Emotions are physiological reactions and they are outcomes of feedback from peripheral nervous system, which means that emotions are unconscious. As a result, *emotions are measured by physiological changes in body, for example, measuring heart rate, electro dermal responses, blood pressure, sweating and other variables that fluctuate during emotional arousal* (Niedenthal *et al.*, 2006; Kalat and Shiota, 2007).
3. Emotions are referred as unconscious and they are reflected as facial expressions and feedback, which directed the researchers to find *methods to measure behavioral observations such as facial and vocal expressions*. (Niedenthal *et al.*, 2006; Kalat and Shiota, 2007).
4. Emotions are collection of cognitive evaluation and labeling process. That is why emotions can be *measured according to both self-reports of evaluation, attribution and judgment* (Niedenthal *et al.*, 2006).

These perspectives show that emotions can be measured by using different methods. Within these perspectives, the first and the last ones are close to each other as they both claim that emotions are conscious reactions and can be measured according to the reports of people. The only disadvantage of self reports is that they cannot be precise as standards of each person can change from other people (Kalat and Shiota, 2007). Yet, self reports are effective when the researcher is interested in changes in

emotion or relative experience of different emotions. The second and third perspectives have also similarities as in these perspectives emotions are unconscious reactions of people and do not rely on the self reports of people. The second perspective measures emotions according to the changes in the functions of the body, like increase in heart rate or changes in brain reactions. One disadvantage of these measurements is that they require medical devices that every researcher cannot reach easily. Still, these methods determine the type or intensity of the emotion (Kalat and Shiota, 2007). The third perspective of measuring emotions relies on people behaviors and expressions and to measure emotions, researchers try to catch every movement of facial muscles. To do this, researchers videotape the reactions and watch these videotapes many times to understand the start and end of each movement (Kalat and Shiota, 2007). Also, some researchers claim that a particular emotion can be indicated by facial expression while many expressions are less certain in indicating an emotion. Yet, this perspective is adopted to avoid the problems of self-reports.

Each emotion measurement method has advantages and disadvantages. While some of them measure the level of emotions, like emotion scales, others serve for understanding the emotion that the person experiences. Designers and market researchers are also interested in methods of measuring emotions. Both designers and market researchers developed their own emotion measurement models based on the listed perspectives.

To sum up, emotions have been tried to be classified; however, psychologists have not agreed on a specific model as universal. The reason behind this is that, emotions have been considered to be too complex to be classified, although this complexity has been tried to be reduced with the suggested models. This complexity makes emotions attractive as there are “events, agents and objects” (Ortony *et al.*, 1988) that makes emotions evoked. Designers and market researchers have been applying to psychology literature to try to understand what causes emotions toward an ‘object’ to be evoked. Although both designers and market researchers are not specifically interested in emotions as much as the psychologists do, both design and marketing literatures have their own bases and reasons to understand emotions. The following sections explain these bases from the design and marketing perspective.

2.2 User Emotions from Design Perspective

Emotional responses of users towards products have become one of the research areas of design research in the last decade. Desmet (2002) states that emotions of users have been neglected for many years before a sudden interest in emotions elicited by products have emerged. Numerous studies have been conducted under the name of 'product emotions' and 'product experience', since the emergence of emotions in design research. This interest led the researchers to come together under the name of Design and Emotion Society, and conferences of 'design and emotion' have been held since 1999. As the focus of this thesis is on the product and brand emotions, the literature review on the related topics, product experience, product emotions and measuring product emotions with respect, are discussed in the following sections.

2.2.1 Product Experience

In recent years, experience has been the focus of the various studies of product design discipline in relation to the topics of product experience, experience design, and interaction design. One of the reasons that lies behind the interest in experience in design is the increase in the number of technological devices (Demir *et al.*, 2006). As the technology develops, different kinds of technological products are introduced into the market for consumer use. Interaction with the product has different physical (e.g. handling) and psychological (e.g. being frustrated) dimensions. For this reason, in literature the product experience has been discussed, in terms of the positive or negative, pleasant or unpleasant experience of users in interacting with a product (Demir *et al.*, 2006).

Introduction of the term experience into the design literature led the researches focus on what 'experience' is. Verryzer (1998) defines experience as an outcome of the procedural knowledge which is the knowledge exercised in the performance of some task and experience of a person covers the physical, mental, emotional and spiritual experiences

Researchers who are interested in product experience from different disciplines, like ergonomics, engineering and psychology, , came together under the name of Design and Emotion Society, Engage Project to incorporate the users' emotional responses into

product design and since then engage network was used to share the studies of the researchers of this society. In Engage Report, published in 2005, product experience is defined as “sensation of interaction with a product through all of a person’s senses, over time and on both physical and cognitive levels”. The terms ‘affect’ and ‘experience’ are sometimes used interchangeably as affect refers to the experience of feeling an emotion. In product design, experience refers to the affective response of a person during the interaction with a product (Demir *et al.*, 2006). Accordingly Demir *et al.* (2006) interacting with the product refers to instrumental (e.g. using, operating), non-instrumental (e.g. playing with) and non-physical (e.g. remembering) interaction. The experience of the user with the product is shaped by both the characteristics of the user (e.g. personality, skills, background) and the product (e.g. color, shape, texture) (Demir *et al.*, 2006). In addition, the context in which the interaction takes place also influences the experience (Desmet and Hekkert, 2007).

Forlizzi and Batterbee (2004) summarize the models and theories of experience related to product and design. As stated there are three approaches related to experience of products: product-centered models, user-centered models, and interaction-centered models. *Product-centered models* focus on the products and these models describe the kinds of experiences and issues that the designers should consider while designing a product, service or environment by giving checklists or guidelines that a product or service has to have, to create good experience. *User-centered models* focus on people and try to understand people by offering ways to describe on what people focus and how they behave while interacting with products. *Interaction-centered models*, on the other hand, focus on the interaction itself, which begins with the interaction of people with products resulting in the experience.

Interaction-centered experience model of Forlizzi and Battarbee (2004) explain user-product interactions and dimensions of experience. They state that user-product interactions occur in three ways; fluent, cognitive and expressive as shown in Figure 2.4. Fluent user-product interactions do not require a complete attention on the activity rather they are mostly automatic and well-learned ones like drinking a morning coffee or riding bicycle. Cognitive user-centered interactions focus on the product at hand and they mostly result in change in user, knowledge or confusion and error, such

as trying to identify the flushing mechanism of a toilet in a foreign country. Expressive product-user interactions help the user form a relationship with to the product and creating a better fit between the product and the person, like setting a background image for the mobile phone. These interactions result in three different types of experiences which are named by Forlizzi and Batterbee as *experience*, *an experience* and *co-experience*. Experience is the ‘self-talk’ that happens when people are interacting with the products, like using instant messaging systems. An experience has a beginning and an end, and this inspires behavioral and emotional change in the experience like discovering an online community of interest. Co-experience is the way that people create meaning and emotion though product use which takes place as experiences created with other people or shared with others, like playing a mobile messaging game with friends.

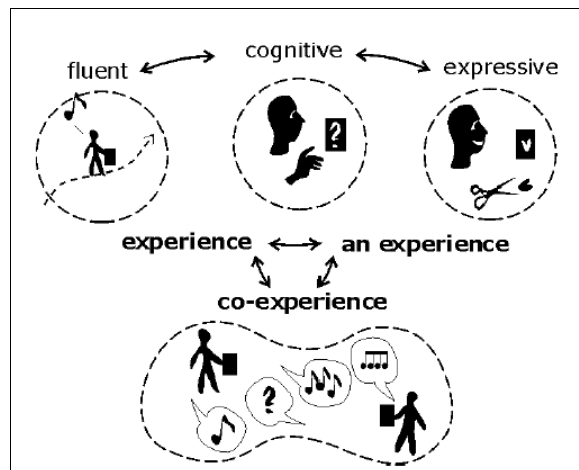


Figure 2. 4 Dynamics of Interaction (Forlizzi and Batterbee, 2004)

The framework of Forlizzi and Battarbee summarizes the types of experiences that people have with products. In this framework, the researchers exemplify different types of experiences in the usage contexts. Apart from these experiences, people have direct experiences with the products. To give an overall framework on what product experience is, Hekkert (2006) stated three components of product experience which are: aesthetic experience, experience of meaning, and emotional experience. The

framework of experiences of users proposed by Desmet and Hekkert (2007) can be studied in Figure 2.5.

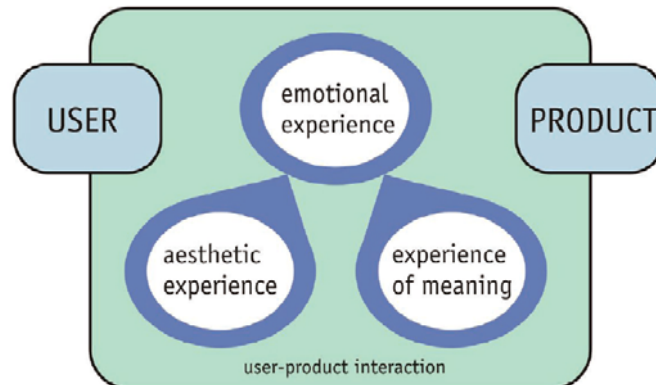


Figure 2. 5 Framework of Product Experience (Desmet & Hekkert, 2007)

According to Figure 2.5, aesthetic experience is defined as the capacity of the product to please one or more of the people' senses, like being beautiful to look at, pleasant to hear, smell or touch (Demir et al., 2006; Desmet and Hekkert, 2007). Experience of meaning comes into prominence when people assign metaphors, personality or other expressive characteristic to the product, like luxury consumer product which represents status and lifestyle, which is an outcome of cognitive process (Demir et al., 2006; Desmet and Hekkert, 2007). Emotional experience is the feelings and emotions that are elicited by the product during the interaction between the user and the product, like feeling desire to a new car model (Demir et al., 2006; Desmet and Hekkert, 2007).

Desmet and Hekkert (2007) state that the three types of experience have mutual relations. However, two of them 'meaning and emotion' and 'aesthetics and emotion' are remarkable as meaning and aesthetics can also elicit emotions. Every different person can assign different meanings to a product, which may result in different emotional responses. One can think that a new model of a brand is modern and challenging and may experience attraction, whereas the other can find the same model cold and impersonal and may experience dissatisfaction. Similarly, aesthetics also may elicit emotional experience as aesthetic experience involves pleasure and displeasure, both of which are provided by products. As an example, desiring an appealing pair of

shoes combines these two experience; appealing being the aesthetic experience and desire being emotional experience.

Another approach towards emotional experience comes from DiSalvo *et al.* (2002). They state that “product can function as *stimuli* for new emotional experiences, as *extenders* of existing emotional experiences and as *proxies* for previous emotional experiences” (p.252). Accordingly, physical handling of a product or interaction with the product (i.e. formal qualities) creates *stimuli*; physical attributes of the product (i.e. intrinsic qualities) creates *extenders* and knowing the maker of the product or memories expressed through a product (i.e. associative qualities), creates *proxies*. These three types of experiences can also be related to the framework of Desmet and Hekkert in the sense that the emotion eliciting reasons of *stimuli*, *extenders* and *proxies* are the same for the aesthetic experience and experience of meaning. As a result, all these approaches summarize in which conditions people experience emotions towards product.

In the following sections, product emotions, explaining how the emotions toward products are elicited, are presented.

2.2.2 Product Emotions

Products satisfy a number of consumer needs. Manufacturers are becoming increasingly aware of the fact that their products have to satisfy needs beyond the functional (McDonagh, Bruseberg and Haslam, 2002). Desmet (2003) focuses on the emotional quality of products as he states that it is becoming important for differential advantage in the marketplace. He argues that, the products are becoming similar with respect to their technical characteristics, quality and price, therefore, the emotions elicited by the consumer products are becoming more important for the manufacturers.

Desmet (2002) explains how emotions elicited by products and conceptualizes basic model of product emotions. Taking the cognitive-appraisal theories as a base (see section 2.1.4.), Desmet defined four key variables in this model: product appraisal, product concern, product and emotion, as can be seen in Figure 2.6.

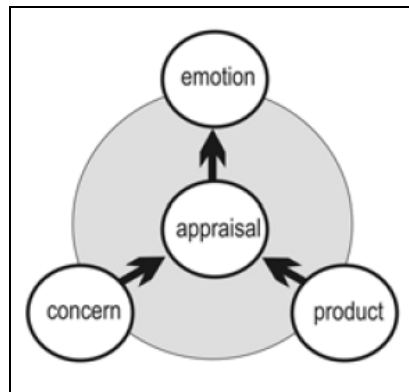


Figure 2. 6 Basic Model of Product Emotions (Desmet, 2002)

According to this model, emotions are elicited towards a product are defined by the relationships of concerns and products which lead to product appraisals. Appraisal is an outcome of the one's evaluation of the significance of the product according to personal well-being, and this significance, rather than the product itself, causes the emotion (Desmet, 2002). This explains why people feel different emotions towards same product. Concerns are the points of reference in this model, which can be attitudes, goals, values, drives, needs, instincts and motives (Scherer, 2001; in Desmet, 2003). They may match or mismatch the one's well-being. According to this, one feel attracted by mobile phones as they match ones' concerns for keeping in touch with other people.

In relation to this model, the product emotions have the three following characteristics (Desmet, 2002):

- **Product emotions are personal;** eliciting process involves concerns and as different people have different concerns, they lead to different emotional responses.
- **Product emotions are temporal;** it is possible to feel positive emotion towards a product one day, feel indifference the following day. The reason for this is again the concerns; they change in time as needs, values, goals and focuses change with time.

- **Product emotions are mixed;** products can elicit more than one emotion at the same time as they can be related to more than one concern at the same time.

Norman and Ortony (2003) point out the relationship between the intended product emotions and the emotions elicited by the product. They state that from product design perspective, designers may intend to induce emotions through design, but the intended emotions may not be elicited by the product as the emotions reside in the user of the product, not the product itself. Although some of the emotions may be intended, but emotions that result from concerns outside the object, like status, may not be elicited. Product is the link between the designer and the user; designer makes design considerations, like visual appearance of the product and how the user experiences the product. The way the users give emotional response to products is defined by Norman (2004).

Norman (2004) defines three levels of emotional responses of users that help designers to design product that elicit intended emotions. These are visceral, behavioral and reflective level (Figure 2.7).

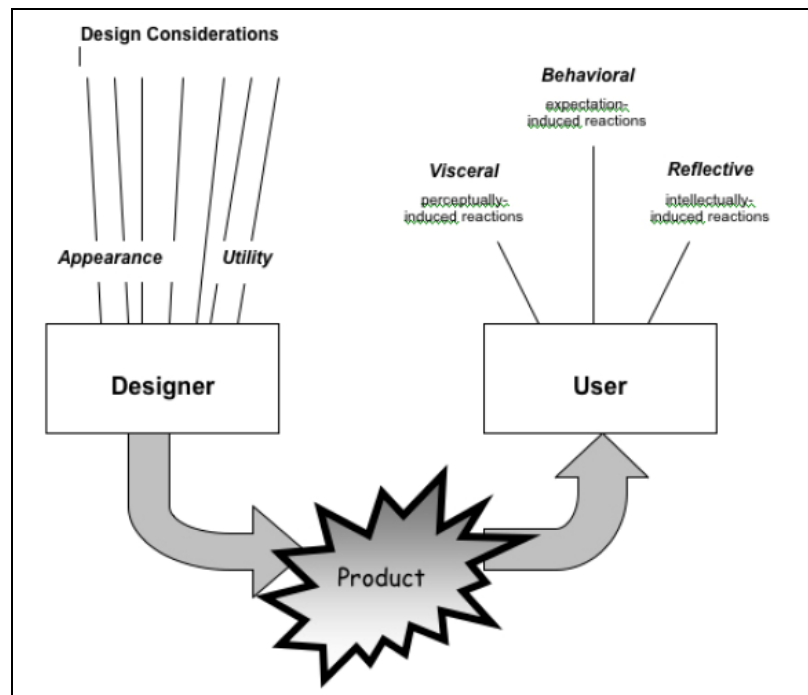


Figure 2. 7 Levels of Emotional Response to Products (Norman and Ortony, 2003)

Visceral level of design is related to the appearance of the product. User's evaluation of the product at this level is based on an automatic perception of the product; good or bad, safe or dangerous. At this level of response, the past experiences or meanings of the product are not involved, rather the responses are based on the current state of the user. The emotions at visceral level are not continuous and interpreted, rather they are innate and biological (Norman and Ortony, 2003). At *behavioral* level, designers attend to the function and use of the product. Behavioral responses are learned and based on the predictions of and expectations about the product and result in strong emotional responses (Norman and Ortony, 2003). In *reflective* level, evaluation of one's actions, understandings and self-image comes into prominence. At this level, people show off or hide their possession and pride of ownership, quality and brand play major roles (Norman and Ortony, 2003). That's why emotional responses at this level are articulated emotions like admiration, pride and shame. Norman (2002) states that, although designers think that the product must be attractive, pleasurable and fun, they also should be effective, understandable and appropriately prided. This means that products should be in balance among these three levels.

The first level of this approach, reminds the aesthetic experience level of product experience model of Desmet and Hekkert (2007). In aesthetic experience, users evaluate the visual appearance of the product, like at the visceral emotional response level. These two models put the product qualities at the core level of emotional responses towards products.

The product characteristics shape the experience of the user as much as the user characteristics. Visual dimensions of a product catch the users' attention in shop displays, advertisements, magazines and other media, and integrate the interpretation of the user with the product to the specific associations and qualities of the product (Karjalainen, 2007). Therefore, visual qualities of a product play an important role in the perception, evaluation and choice of a product (Veryzer, 1998). The user-product interaction is a mutual process; both sides affect the quality of interaction. The physical qualities of the products have importance in the usage, as well as the way the users interpret these qualities is important (Cila, 2008). These product qualities include

tangible and intangible qualities. Tangible qualities include shape, form, color, texture, material, surface finishing (Demirbilek and Şener, 2003) and product communicate with users with these qualities directly in the experience process. The intangible qualities, like functionality, brand of the product, associated meanings and usability (Desmet, 2002) also play active role in the product experience process in the sense that they create positive and negative perceptions, emotions, values and associations about the product (Wikström, 1996; in Demirbilek and Şener, 2003). All these tangible and intangible qualities are behind every type of product experience.

2.2.3 Measuring Product Emotions

As product experience and emotions become one of the research topics of design research, a number of studies on measuring emotions have been carried out. On the bases of psychology literature, researchers have developed tools and methods to measure and understand emotions elicited by products effectively. In the design literature, these tools are grouped into two: generative and evaluative tools. Generative tools are used to collect, represent or explore information and define product characteristics, and evaluative tools are used to measure sensory characteristics, expressions or meaning of products and emotional reactions to products. These tools are constructed mainly on four major methods: physiological measures, self-reports and questionnaires and pictorial scales at specialized level.

1. Physiological measures are used to understand emotions of users towards products which include cameras, microphones and sensors to measure skin and pupil responses; however these methods cannot be regarded as totally precise in measuring emotions and understanding which emotions are evaluated (Dormann, 2003), since these emotions can be affected by the environment that the emotion is evoked.

2. Self-reports in measuring product emotions involve interviews, product evaluation forms (McDonagh *et al.*, 2002; Bruseberg and McDonagh, 2001), and product personality profiling techniques (McDonagh *et al.*, 2002; Bruseberg and McDonagh, 2001) which all relate to user's self evaluation of products and emotions. Using mood boards (Lucero and Martens, 2005; Hoem and Bjelland, 2006) is another technique that is used to understand emotional responses in which visual images that represent

emotions are shown to the users to match their emotions with the products. In this technique, abstract images, exemplified in Figure 2.8, are used to provoke emotions (Bruseberg and McDonagh, 2001). These techniques are mostly used to understand which emotions are elicited by the products rather than measuring the level of emotions elicited by the product.



Figure 2. 8 Mood Board Examples (Lucero and Martens 2005)

3. *Questionnaires, adjective checklists and emotional scales* are used mostly for measuring the level of emotions elicited by the product (Dormann, 2003). One of the developed emotion measuring technique is PAD Emotion Scales software, developed by Mehrabian (1996), which consists of 34 items including pleasure-displeasure, arousal-nonarousal and dominance- submissiveness scales. PAD scales are used to understand users' level of emotions towards product. Also, Dormann lists an adjective checklist (Mano, 1996; in Dormann, 2003) that involves both positive and negative emotions to be used in questionnaires for understanding the level of emotional experiences related to products. These include;

*Arousal (astonished, surprised, aroused); Elation (elated, active, excited);
Quietness (quiet, still, quiescent); Boredom (sleepy, sluggish, drowsy);
Pleasantness (pleased, satisfied, happy); Calmness (calm, at rest, relaxed);
Unhappiness (unhappy, sad, blue); Distress (anxious, fearful, nervous)*

4. *Pictorial scales* are also widely used in measuring product emotions. These non-verbal techniques, as exemplified in Figure 2.9, are developed by researchers to make these scales universally used regardless of language differentiations (Desmet, 2002).

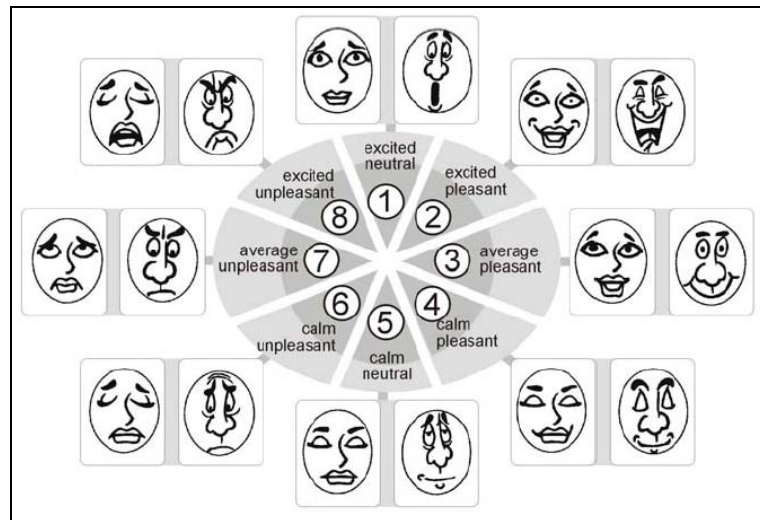


Figure 2. 9 Emocards (Desmet *et al.* 2001)

Self-assessment manikin (SAM) (Lang, 1985; in Dormann, 2003) and Emofaces (Desmet, 2002) include pictorial illustrations of emotions related to feelings of users. PrEmo software, developed by Desmet, includes 14-emotions related to products and uses pictorial illustrations to show the emotion to the user. This tool is widely used by companies in product design research. The 14 emotions that are related to product appearance defined by Desmet (2002) are;

Desire, Pleasant Surprise, Inspiration, Amusement, Admiration, Satisfaction, Fascination, Indignation, Contempt, Disgust, Unpleasant Surprise, Dissatisfaction, Disappointment, Boredom

Design literature explains that emotions related to a product are elicited by the product itself and the meanings that users attach to the product. Product experience becomes the starting point of the emotions and user's background as much as the properties of the product play an important role in this experience. The brand of the product is considered to be an influential factor for emotions as the user attaches meanings to the

product. At this point, how users attach meanings to brands together with products of these brands become an important question, as this attachment may affect the emotions of users towards product. The following section explains how marketing perspective deals with emotions of users.

2.3 User Emotions from Marketing Perspective

Mozota (2003) argues that marketing, like design, is the process of matching customer needs with want-satisfying goods and services. This makes these two perspectives share the same idea of developing an understanding of customer needs and trying to influence those needs to establish healthy customer relationships. Mozota states that, both work for building a product strategy differentiate the company from the competitors and create an advantage. In this relationship, design creates the difference that is perceived by the consumer as benefits. On the other side, branding is the way of creating differentiation to compete in the market. In other words, what design deals with is the way consumers interact with the product for their needs in the right way; whereas, what marketing deals with is the way consumers buy and repurchase the products of the brand for their needs.

2.3.1 Brand and Branding

In this section, emotions of users will be investigated in the level of marketing, with specific focus on branding and brand experience. In relation to these, consumer behavior and brand emotions will also be explained. Brand experience is one of the important topics of marketing literature which influences the user emotions. One of the recently emerged topics in marketing, called 'sensory/emotional branding' is expanded and emotion measuring methods used in marketing research are described. To visualize what brand is, several definitions of brand and branding will be given and discussed.

Creating brands that are differentiated in the market has become the focus of marketers to attract the attention of the consumers. From the marketer's perspective, brand is;

“...name, term, sign, symbol, or design, or combination of them, intended to identify the goods or services of one seller or group of sellers and to

differentiate them from those of competitors” (The American Marketing Association, in Kotler and Keller, 2006, p.136).

According to this definition, brand is the way to differentiate the offered product or service, from its competitors. These offerings can be functional, rational, or tangible which are related to performance of the brand’s product; or can be symbolic, emotional or intangible, related to the representations of the brand (Kotler and Keller, 2006). This definition, however, does not cover the value and influence that is created by the brand (Brand Glossary, 2007). That is, brand is the mixture of attributes, tangible and intangible, which all create a value that have different interpretations. In the Brand Glossary (2007), this value is explained from the consumer perspective as: “the promise or delivery of an experience”. In relation to this, brand can be defined as the promise that links a product or service to the consumer (Adamson, 2006). Adamson, also highlights that brands are mental associations, and these associations can be words, images, emotions or combination of these evoked when a product, a service, an organization or even country is mentioned. Accordingly, brand exists in the consumers’ minds and is related with not only what it represents, but also the total experiences that it is associated with.

Branding, is defined as creating differences, which involves creating mental structures (words, images or emotions) that helps the consumer organize their knowledge about product and services of a company and decisions (Kotler and Keller, 2006; Adamson, 2006). These mental structures are created to convey the right messages about the company to the consumers. These are related to the brand differentiation, how the company is different from the competitors. Adamson (2006) states that, a brand should give powerful signals to the consumer about the company that will explain for what the company stands for, and how it is differentiated from its competitors. He argues that these signals should be defined by the company and conveyed through expressions of the company, for example packaging, advertising, web sites, signage, product design, and retail environments. However, from a different perspective, Shroeder *et al.* (2006), suggest that branding cannot be understood only a way of conveying messages; it is related to cultural process that is “performed in an interplay between art and business, production and consumption, images and stories, design and communication” (p.3).

This perspective covers the consumer as much as the company and attracts attention on the culture where the brand is created (by the marketers) and where it lives (in consumers' world).

In the marketing literature, there are also different terms related to brand and branding. These terms explain the nature of brands, from both the owners' and consumers perspectives. Figure 2.10, (reproduced from Laituri, in Cuffaro, 2006) shows the brand anatomy and illustrates the basic brand related terms.

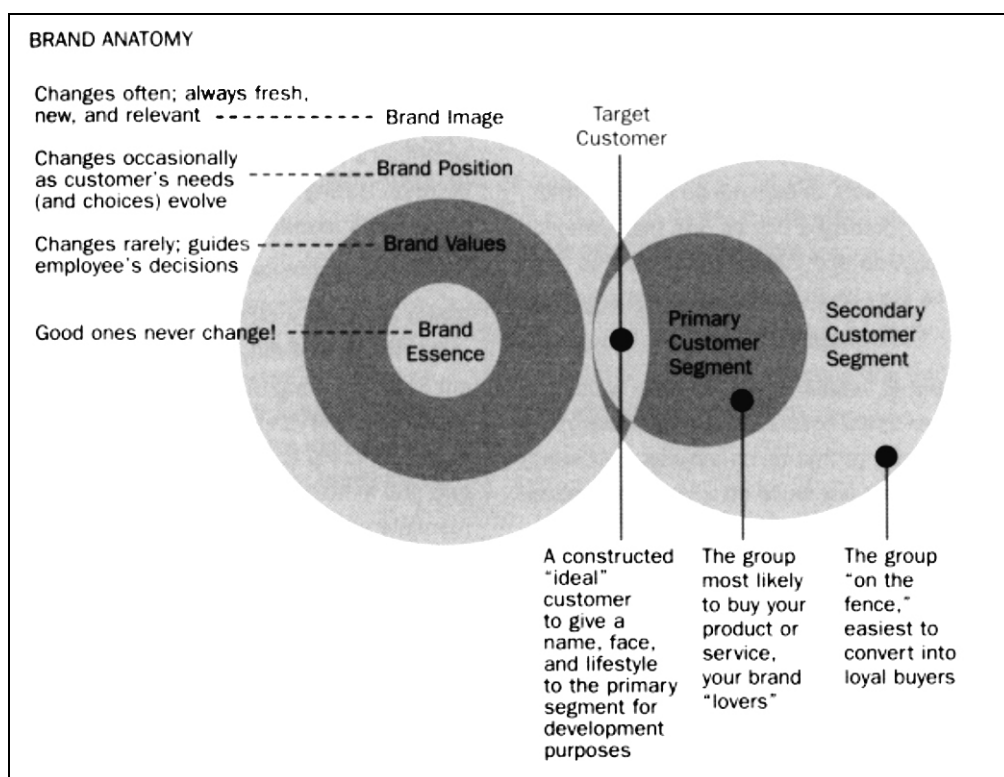


Figure 2. 10 Brand Anatomy (Laituri, in Cuffaro, 2006)

According to Figure 2.10, brand essence is the center of the brand which is the basic and fundamental idea of the brand (Laituri, in Cuffaro 2006). Brand values are the ones that are built on the brand essence and basic guiding principles or rules that all the employees support in the company; brand position is a statement that marketers try to create on the customers' mind and brand image is the impression of all elements of a brand (logo, signage, products, websites, advertising, packaging) (Laituri, in Cuffaro,

2006). The figure also covers the customers; secondary customer segment is the one that can be easily converted to primary customers, primary customers are those who love to buy the brand and target customer is the group that marketers aim to sell the product or service.

All the brand related terms may be managed by marketers or brand owners but, as stated before, where the brand lives is created by the experience of the consumer with the product or service of the brand. As a result, brand experience and consumer behavior comes into prominence within all these relationships.

2.3.2 Consumer Behavior and Brand Experience

Brand experience can be designed, (e.g. retail environments, advertising, products, services and so on) but cannot be totally designed as some of the experiences are not easy to control (e.g. word of mouth, journalist comment) (Brand Glossary, 2006; Adamson, 2006). However, consistent consumer interactions, repeated purchases and consumption that form a clear, differentiated and holistic experience create strong brands (Brand Glossary, 2006; Boyle, 2006).

Consumer behavior can be the starting point of understanding the brand experience to explore how it affects marketplace behavior, and how individuals select and buy goods, services, ideas or experiences to satisfy their needs and desires (Berkman *et al.* 1996; Kotler and Keller 2006). Consumer motivation is believed to be the driving force of the consumer behavior (Berkman *et al.*, 1996; Evans *et al.*, 2006) and “is the drive to satisfy needs and wants, both physiological and psychological, through the purchase and use of products and services” (Berkman *et al.* 1996, p.298). Berkman *et al.* refer to Sheth’s consumer motives that describe the needs that drive consumer behavior. These needs include *functional, aesthetic/emotional, social, situational and curiosity* needs which all affect the decision making process of the consumer. Table 2.2 (Berkman et al., 1996) illustrates how these needs are satisfied.

Table 2. 2 Sheth's Consumer Motives

Need	Satisfied By
Functional	Product or service or the function of the product
Aesthetic/emotional	Appearance of the product or service
Social	Status of a product or service
Situational	Unexpected benefit of the product or service
Curiosity	Interest aroused by the product or service

As an example, the consumer may purchase a car of a specific brand, because of its safety (functional need), because of its style and color (aesthetic/emotional need), because of the reference group that it reflects (social need), because of a discounted price (situational need) or just because it is a new experience (curiosity need).

These needs drive consumer behavior and affect their decision making process (Berkman *et al.* 1996). In this decision making process, the needs of the consumers direct the user to choose a general category of goods or services (going to a journey or staying at home), a modal choice (going to journey by train or air) and a specific choice (going to journey by X-airlines or Y-airlines). Consumer behavior is affected by cultural and social factors. Culture, subculture and social classes are believed to affect the consumer behavior; a person tends to act like the rest of the people within the same social class who have, for example, similar income, education or occupation. Another consumer behavior influential are social factors such as reference groups, family, social roles and status. Reference groups, is the group whose perspective is adopted by individuals in forming beliefs, attitudes, opinions and behaviors, believed to have a direct or indirect effect on behaviors of individuals and their purchase decisions in selecting products and brands (Berkman *et al.* 1996; Evans *et al.* 2006; Kotler and Keller, 2006). These direct or indirect effects can be divided into four in relation to their influences, which can be seen in Table 2.3 (reproduced from Bearden and Etzel, 1982).

Table 2. 3 Public-Private and Luxury-Necessity Dimensions of Purchase Decisions
(reproduced from Bearden and Etzel, 1982)

Consumer Product	Influential	Degree of Influence
Publicly Consumed Luxury	Brand Product	Strong Strong
Privately Consumed Luxury	Brand Product	Weak Strong
Publicly Consumed Necessity	Brand Product	Strong Weak
Privately Consumer Necessity	Brand	Weak Weak

Bearden and Etzel (1982) highlight the public-private and luxury-necessity dimensions with product and brand purchase decisions. As Table 2.3 illustrates reference group has strong effect on both publicly used consumer luxury brands and products, such as sports cars, golf clubs, sailboats, since both are visible to others. Strong reference group influence on product is seen on privately consumed luxury, such as bread makers, shredders, TV games, as the product is commonly owned or used, but brand is not affected by the reference group as the brand consumption is hidden from the public. Publicly consumed necessities, such as wrist watches, clothing, cars, are not affected by reference groups in product level as these products are owned by everyone, as it is a necessity. However, brand is affected by reference group as the specific brand purchased is seen publicly. Finally, the reference group does not have any effect on privately consumed necessities, such as freezers, mattresses, duvets, as neither the brand nor the product is visible to others. Whatever the effect of the reference group may be on the consumer, when it comes to consumption, the final purchase decisions of the consumer change according to dealers, purchase amount, timing and purchase methods as much as the brands and products.

During the consumption of a product or service, consumer evaluation is rather subjective through cognitive, affective and relational interactions (Holt, 1997; Prentice 1996; Pine and Gilmore, 1999; Schmitt 1999; Cunnell and Prentice 2000; in Boyle 2006).

This consumption experience is not limited to pre-purchase or post-purchase activities, rather it is a series of activities in which the consumer is involved. These are (Caru and Cova, 2006);

- pre-consumption experience: searching for, planning, imagining,
- purchase experience: choosing and paying the product, and living in the purchase environment,
- core consumption experience: satisfaction/dissatisfaction, flow/irritation,
- remembered consumption experience: looking at photographs, talking with friends.

Gobe (2007) states that these experiences result in positively, when the consumer feels that these experience reflects consumer's identity, values and tastes. This effect has a great impact on the consumer to repeat the experience and worth the price paid for it (Boyle, 2006). This is what the marketers expect from the consumers, repeated purchase activity, which is referred to as 'brand loyalty' (Berkman *et al.*, 1996; Brand Glossary, 2006; Boyle, 2006).

The experience of the consumer draws attention at this point as Gobe states that products fulfill needs, experiences fulfill desires, but it is important to do both (2002) in which experience of brand and product shapes the perceptions of the brand (Dubberly, 2000; in Rondeau, 2005). Rondeau (2005) states that consumers experience the brand in two ways: indirectly and directly. Brands are experienced indirectly when consumers are told about the product or brand, most probably through advertising, or promotions. The consumer is not active in this experience, in which the message of the brand should be repeated to create brand perception. In direct experience, however, consumers are active since consumer goes to the stores to look at the product, purchase it and use it. This kind of experience, with direct consumer involvement, has more positive effect than indirect experience, as the consumer feelings of consumers are involved directly. Coca Cola brand, for example, is represented by a logotype, a brand name and a glass bottle, is created through experience of buying and drinking it and appreciating the taste of the product (direct experience) and experience with TV commercials and the messages of these commercials (indirect brand experience). Other than these

experiences, brands as suggested by Schmitt (1999) help consumers to create five types of experience (Schmitt, 1999, in Keller and Lehmann, 2006, p. 746);

- Sense experiences involves sensory perception
- Feel experiences involves affect and emotion
- Think experiences involves creative and cognitive actions
- Act experiences involves physical behavior and incorporating individual actions and lifestyles
- Relate experiences result from connecting with a reference group or culture.

Marketers are aware that consumers are human beings and they have emotions that are involved in the experience of a brand that mostly affects the buying decisions (Berkman *et al.*, 1996; Gobe, 2001; Lindstrom 2005,; Edwards and Day, 2005; Gobe, 2007). Marketers use this information to convince to the consumers to buy their products and services (Evans *et al.*, 2006). Evans et al. state that most advertisements represent the product or service of a brand such an emotional and persuasive way that consumers think that they should buy that product even they do not need that product for sustaining life. This manner, however, does not create need, rather encourages the consumer to want or desire the brand by associating the purchase of the brand with a need.

2.3.3 Sensory Branding / Emotional Branding

Emotional branding or sensory branding is the marketing strategy that is investigating the emotional relationships between consumer and the brand (Gobe, 2001; Lindstrom, 2005; Thompson et al., 2006; Gobe, 2007). The term 'emotional branding' first came into prominence with the book of Gobe (2001) and continued to be used by others. As suggested, it is a consumer-centered, relational and story-driven approach to create affective bonds between consumers and brands (Roberts, 2004, in Thompson *et al.*, 2006). It is also a way for brands to elicit emotions by addressing to five senses (Gobe, 2001; Lindstrom, 2005). This approach focuses on understanding the consumers, what they really want, how they experience a brand and how they behave during the consumption experience. According to Edwards and Day (2005), consumption is not just buying, but using, sharing, reflecting and disposing which involves the emotions of consumers as consumers make buying decisions according to their feelings and

emotions about a particular brand (McEwen, 2005). Therefore, creating a consumer experience, buying a product or service of a brand is the key term for the emotional branding. As an example, Starbucks Coffee is said to be an 'emotional brand' (Gobe, 2001; Lindstrom 2005; Thompson et al. 2006). What makes this brand emotional is the experience consumers have with the brand, the environment in the stores (e.g. odor of the coffee, the music played), ranges of coffee ordered, and drinking the coffee within an enjoyable environment. Apart from these, it is said to change the leisure time activities and daily routines for consumers which created coffee shops and coffee bean markets all over the world (Thompson et al., 2006; Helliker and Leung 2002 in Thompson et al. 2006). That is why, Starbucks is given as a strong example of emotional branding and brand positioning (Gobe, 2002; Keller, 2000; Roberts, 2004).

In his book, Gobe (2007) explains the emotional branding from both consumer and company perspectives. He states that, as new economy is turned from factories, capabilities, productions into consumers, branding has become a new language in which innovation, flexibility and speed in market stands as competitive factors in the market. Gobe also states emotional branding is about the engagement of people with the brands in the level of desires in which they "need to own, offer, or benefit from a brand offering". Gobe suggests that brands communicate with people in three emotional levels (Figure 2.11):

1. Head Communication: speaks to desires and needs
2. Heart Communication: captures a sense of shared values and connection
3. Gut Communication: laps into intuitive desires that generate a drive and badge-like attachment to a brand.

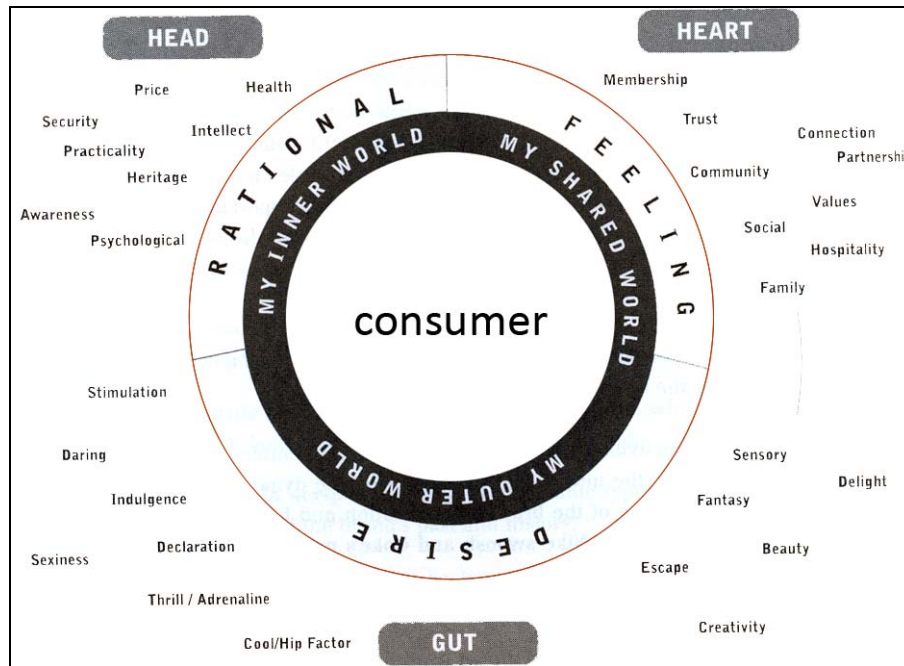


Figure 2. 11 Levels of Emotional Branding (reproduced from Gobe, 2007)

These levels summarize the concept of ‘emotional branding’ from the perspective of a consumer. Head communication is about rational connection with the brand (such as price), heart communication is about feelings towards a brand (such as feeling trust) and gut communication is about desiring of a brand. Although these explain how the consumers interact with and connect to a brand, there still remains a gap between the brand and the consumer, and how this connection can be built effectively?

The ways to create emotional brands are suggested by different market researchers. Edwards and Day (2005) suggest that creating emotional connections with consumers starts at company, ideology of the company is the starting point, and why the company or brand is created should be evident to employees. Capability, tangible resources (e.g. operational, financial, assets), and intangible resources (e.g. culture, knowledge and reputation) of the company, consumers and consumer environments are the values to be considered. One of the counter arguments to this is to create market advantage, these steps are already listed. However, how these steps will result in an “emotional brand” is not clear (Thompson *et al*, 2005)

Another way suggested is appealing to five senses. Creating a brand sound, shapes, color, and an environment concept that consumers will face in a brand's store will all come out in an emotional brand (Lindstrom, 2005). This approach is explaining the experience that consumers have in consumption environments. Gobe (2007), however, explains in his recent book that, emotional branding is about design, and it becomes the most powerful way to connect people with brands emotionally. He states that design brings a human touch to the products and emotional design, creating experience, reaches the emotions faster than any other means of communication. The emotional sensations that people experience with a product will establish the personality of that brand in consumer's lives and support the brand's marketing programs (Gobe, 2007). The main argument against these approaches is that, researchers are categorizing brands as 'emotional' and 'not emotional' which makes the brand or product of that brand either inspiring the user or not (McEwen, 2004). McEwen states that according to these categorizations, sport cars and perfume can be treated as emotional, while office supplies and household cleaners are not. However, emotion connections should not be reduced to only brand level. According to McEwen, consumers may also be emotional about their daily used necessities (Evans *et al.*, 2006) that no one sees the brand name.

2.3.4 Measuring Consumer Emotions

As stated before, emotions can be measured, so can be emotional connections and both emotions and emotional connections can be managed (McEwen, 2006). Marketing literature refers to psychology when measuring emotions becomes the question. It is seen that researchers use scales to understand emotions (Westbrook and Olive, 1991; Richins, 1997; White and Yu, 2005) as well as interviews (Thompson et al., 2005) and emotion measurement tools (Ipsos-Ideas, 2006). Richins (1997) is one of the researchers who was interested in the consumption emotions and after exploring the psychology literature. She conducts a series of empirical studies to find out the consumption emotions descriptors (CES) and uses a four-point scale to compare the usefulness of the descriptor. The (CES) consist of emotions that are related to consumption experience which are:

Anger, Discontent, Worry, Sadness, Fear, Shame, Envy, Loneliness, Romantic Love, Love, Peacefulness, Contentment, Optimism, Joy, Excitement, Surprise, Guilt, Pride, Eagerness, Relief (Richins, 1997).

Westbrook and Oliver (1991) investigated the relationship of consumption emotions and satisfaction judgments in the post-purchase period. In their study, they refer to Izard's (1971) basic emotions and use the ten emotions to measure consumption emotions in Likert-Scale;

Interest, Joy, Surprise, Sadness, Anger, Disgust, Contempt, Fear, Shame and Guilt

Apart from these, to measure emotions towards advertisements, Ipsos-Ideas Research Group, which works on advertising, loyalty, marketing, media and public affairs, (2006) developed a software, 'Emoti*Scape', in the light of the findings of psychology. In this tool, emoticons (Figure 2.12), representing each emotion with the same character were created and shown in the process of measuring emotions. The consumer 'points and clicks' to indicate the emotions they experience.

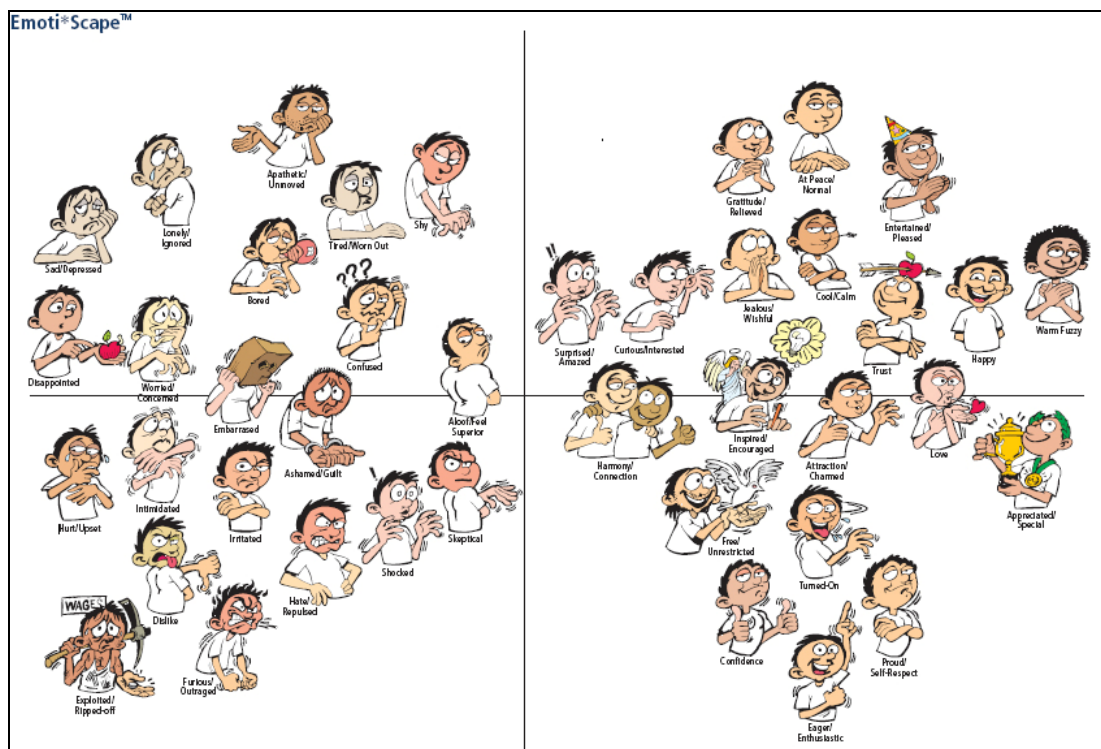


Figure 2. 12 Emoti*Scape

2.4 Chapter Discussion

In this chapter, different information from psychology, design and marketing have been collected to create an understanding of user emotions. In understanding what emotions are and how they are evoked, psychology literature has been investigated. As psychology literature focuses on all the emotions evoked by any kind of influential of emotion, it gives valuable basic information in understanding how emotions are evoked by products or brands. The appraisal model previously (see Section, 2.1.4), explains the importance of objects in appraisal process. This perspective is widely used in design research in explaining product emotion. Mainly focusing on products, design research deals with the product experience, and study the emotions elicited by products in product experience. Similarly, in marketing, researchers mainly focus on how brands, rather than products, evoke emotions. In other words, marketers see brands as a business; whereas designers see brands as an image (Laituri, in Cuffaro, 2006).

As emphasized before, emotions towards products and brands can be positive and negative. Feeling positive emotions towards a brand may make the consumer feel positive towards the products of that brand, or being attracted by the appearance or experience of product may affect emotions positively towards brand of the product. Some products and brands are more affective in evoking emotions compared to others and some have negative effect. Considering these, as a framework that is connecting the intersection of product and brand emotions, a basic figure have been created to figure out the brand and product emotions. In creating this figure, four different consumer type definitions of Berkman et al. (2005), have been used to explain the relationship between positive and negative emotions towards brand and their products: brand loyalist, routine brand buyers, information seekers and brand switchers. It is possible to illustrate brand and product emotion perspectives in Figure 2.13.

		Product Emotions	
		Positive	Negative
Brand Emotions	Positive	P (+), B (+) (Brand Loyalists)	P (-), B (+) (Routine Brand Buyers)
	Negative	P (+), B (-) (Information Seekers)	P (-), B (-) (Brand Switchers)

Figure 2. 13 Relationship between Brand and Product Emotions

According to the figure, consumers are categorized in four: brand loyalists, routine brand buyers, information seekers and brand switchers in relation to positive and negative emotions towards brands and towards products. According to Figure 2.13, consumers are named as brand loyalists when both product and brand emotions are positive. The consumers have positive feeling towards both brand and the product, which both design and brand literatures are interested in. An example to this is Apple buyers; they have high level of involvement with both product and brand and they are likely to accept both the brand and products of that the brand. However, contrastingly, while brand emotions can be positive, emotions towards the product of the brand can be negative. These types of consumers, named as routine brand buyers, buy and use the product as they only care the brand of the product. Just as the opposite, information seekers, do not feel positive towards the brand but product in which the experience with the product. These users mostly more interested in the experience they have with the product rather than the brand of the product. Finally, brand switchers are the ones who are not satisfied by both the product and brand experience and easily switch to use another brand and product of that brand. Within these relationships, only brand loyalist feel positive towards brands and product.

From the marketing perspective, researchers talk about the emotions in positive and negative level. Negative emotions, as much as positive ones, are important to supply valuable information for designers to understand the effect of brand to the product emotions. As brand of the product can be a part of emotions elicited by the product, the effect of it should not be ignored in measuring product emotions. However, emotions elicited by products are not only at positive and negative level. One product may elicit positive emotion by its form and brand, but may suggest a negative emotion by its color.

In the literature, marketing perspective explains that brands should communicate with consumers through their emotions. By this, companies would likely to get more market share among their competitors. However, there could not be encountered any research on which specific emotions are elicited by the brands in consumption. Moreover, only some of the brands are named as 'emotional' and some are kept out from this description, like the ones named as privately consumed necessities.

There are studies interested in specific emotions, including surprise (Ludden et al., 2006), stress (Nilsen and Bjelland, 2006); fun (Cila 2008) in relation to understanding product experience. However, there could not be encountered any study that is explaining the relationship of emotions of users towards brands and products of these brands, and which particular emotions are affected by both the brand and the product. Therefore, to combine the relationship between brand and product emotions, an empirical research has been carried out. The following chapter describes the empirical research carried out to understand some of these relationships.

CHAPTER 3

DESIGN AND CONDUCT OF THE STUDY

This chapter presents the empirical study of emotional exchanges between brands and products in order to understand the relationships between emotions elicited by brands and products of these brands. The chapter gives details of the methodology followed in the study. First, the aim of the study is presented. The study methodology is then presented including selection of the product and brands are explained. Participants of the study, equipment used and the study method are also explained. The third section reveals the results and analysis of the empirical study through the reports of the participants used in the study and limitations of the study. The chapter then concludes with general discussions.

3.1 Aim of the Empirical Study

The literature review showed that both designers and market researchers are interested in emotions of users however, the way they handle these emotions differ; designers are interested in emotions of users towards products, while marketers are interested in emotions of users towards brands. While designers are making research to understand product emotions under the name of 'emotional design', the term 'emotional branding' is being discussed by marketers which is said to become a new strategy to sell the product. The role of product emotions in this strategy attracts attention of market researchers as products, as much as brands, elicit emotions and makes the user buy and use the product. However, how these emotions are affected by the brands and products together have not been researched yet, and which properties of products affect these emotions still remains unanswered. Therefore, the empirical study directed at answering these questions.

The aim of the study is to demonstrate the emotions elicited by brands and products of brands. The emotions towards a product can be both positive and negative and can

result from the various qualities of products, such as color, form and material. While deciding on these qualities, one of the important product aspects that designers consider is the brand. The identity of the brand becomes important, and product is designed to speak the same language with other products of the brand. There is a two-way interaction at this point; brand affects the qualities of the product, meanwhile the product strengthens the brand image. This two-way interaction may also, positively or negatively, affect the emotions of consumers towards brands and products.

In this study, the reasons behind these emotions towards products were questioned; whether these emotions are resulted from the product itself, the brand of the product or combination of both. The reasons for both positive and negative emotions were investigated, to reveal the qualities of a product that makes the user feel positive as well as negative. Therefore, the objectives of this study were to reveal the relationship of the emotions of users towards products, to investigate the role of brand within this relationship, and to identify the product qualities that are related to this relationship. The empirical study specifically carried out to aim to answer the following questions.

- How does the brand image affect emotions of users?
- What kind of relationship exists between emotions elicited by brands and products of these brands? What similarities and differences do these emotions have? Which properties of the products elicit these emotions?

The outcomes of the empirical study are expected to provide information about the effects of brands to users' emotions towards products of these brands, in both positive and negative level. It is expected that this information will give designers an overall idea about these effects and frame the positive and negative relationships between the brands and products. It will also be valuable for designers to understand user's expectations, experiences and perceptions in relation to brands and products of these brands. As designers do not consider only product qualities in design process, with the results of this study, designers can also evaluate qualities of products and brands that would result in positive and negative emotions while considering design possibilities.

3.2 Methodology

This section presents the details of methodology followed during the empirical study.

3.2.1 Selection of Product

As the first step of the study a product was chosen based on the below criteria.

1. *Perception of the product*: product qualities, such as color, shape and material should easily be perceived at first glance. Product should communicate its purpose easily.
2. *User profile*: the product should be used by anyone, by users within wide age range and by both genders
3. *Branding*: the product should ideally be produced by more than one company, and Turkish people should be familiar with them.
4. *Technology and usage*: the product should reflect the technology, and should be easy to use.
5. *Physical Interaction*: the product should be interacted physically and this interaction should not be hidden in digital interface.
6. *Function*: function of the product should be easily understood.

Potential product groups deemed to meet the required criteria can be seen in Table 3.1. The table also shows the examples of potential brands for the related product group that exist in the Turkish market, and the number of criteria met by that product group.

Table 3.1 Potential Product Groups

Product Group	Potential Brands (e.g.)	Criteria No. Met
Mobile Phones	Nokia, Samsung, Motorola, LG, Sony-Ericsson	1,2,3,6
MP3 music players	Apple, Sony, Samsung, Creative, Philips	1,2,3,4
Electronic Personal Care (e.g. shaver, epilators, toothbrush)	Philips, Braun, Sinbo, Rowenta	1,3,4,5,6
Small Home Appliances (e.g. kettle, iron, blender)	Philips, Braun, Tefal, Arçelik	1,2,3,4,5,6
Personal Computers	Apple, Asus, Toshiba, LG, Dell	1,2,3,4,6
Personal Use Office Products (e.g. punch, stapler)	Koziol, Alessi	1,2,4,5,6

The products that have digital interfaces were avoided, so as not to make the users talk about the digital interface only, rather than the product itself. Accordingly, products of which usages may not solely be understood by their visual appearance but require screen interaction, such as mobile phones, personal computers and mp3 music players, were eliminated. Electronic personal care products were also eliminated because of the gender differences, as the products within this group cannot be used by both genders (e.g. shavers). Small home appliances were found to meet the most criteria from the list, and over discussions with research colleagues ‘iron’ was decided to be used in the study.

3.2.2 Selection of Brands

In order to find out available brands for the iron (as described in 3.2.1), different shopping centers in Ankara were visited. A list of mostly encountered brands including *Arzum, Arçelik, Braun, Fakir, King, Philips, Sinbo* and *Tefal* was made. Where possible, during the visits pictures of these irons were taken to create a visual product pool for further use.

The list then reduced down to include five brands: two local (i.e. *Arzum, Sinbo*) and three foreign (i.e. *Braun, Philips, Tefal*). Five products were believed to be a sufficient

number to gather information without exhausting the participant. *Arzum* was chosen as a well-known local brand which has been started to be widely used by Turkish consumers. *Sinbo* was chosen as a newly introduced brand in the local market which is also known as with its affordable products. *Braun*, *Philips* and *Tefal* are chosen as the three were mostly encountered foreign brands in the market. In the study, one iron from each brand was used. The pictures of the selected irons can be seen in Figures 3.1 to 3.5.

In this study the aim was to make the participants evaluate the visual qualities of the products, rather than general product evaluation. Price of the products was not taken into consideration. The products that were sold in the market were selected for the study.



Figure 3.1 Iron 1: Arzum



Figure 3.2 Iron 2: Braun



Figure 3.3 Iron 3: Philips



Figure 3.4 Iron 4: Sinbo



Figure 3.5 Iron 5: Tefal

In order to study the effect of brand names on users' emotions towards a product, three different product (i.e. iron) set were created. Set-1 consisted of irons with original brand names (Original - O); Set-2 consisted of irons with purposefully altered brand names (Mixed - M); and Set-3 consisted of irons with no brand names (None - N). In Set-2, the mixed brand names were placed onto irons on exactly where the original brand name was, and as photorealistic as possible, using Adobe PhotoShop application. This was to avoid revealing alterations on the brand names. The distribution of brand names within product sets can be seen in Table 3.2.

Table 3.2 Distribution of brand names within product sets

Product Set	Iron-1	Iron-2	Iron-3	Iron-4	Iron-5
Set-1 (Original - O)	Arzum	Braun	Philips	Sinbo	Tefal
Set-2 (Mixed - M)	Sinbo	Philips	Tefal	Braun	Arzum
Set-3 (None - N)	-	-	-	-	-

3.2.3 Selection of Participants

The participants were recruited through email and phone. In total, 105 participants (67 female, 38 male) participated in the study, with ages ranging from 20 to 60, and with a mean value of 30. The participants were chosen from different occupations, including biologist (1); economist (1); banking staff (2); psychologist (3); statistician (4); engineer (6); academics (6); school teacher (6); housewife (6); government officer (13); student (15); designer/architect (17); and research assistant (25).

The participants were divided into three groups of 35. Group 1 participants studied the iron Set-1 (O); Group 2 participants studied iron Set-2 (M); and Group 3 participants studied iron Set-3 (N). Distribution of the participants within the three groups can be seen in Table 3.3, detailed information can be seen in Appendix A.

Table 3. 3 Characteristics of the Participants (between the three groups)

	<i>Group 1</i>	<i>Group 2</i>	<i>Group 3</i>	<i>Total/Average</i>
<i>No. of Male participants</i>	<i>16</i>	<i>11</i>	<i>11</i>	<i>38</i>
<i>No. of Female participants</i>	<i>19</i>	<i>24</i>	<i>24</i>	<i>67</i>
<i>Average age</i>	<i>31</i>	<i>29,66</i>	<i>30,8</i>	<i>30,4</i>

3.2.4 Decision on Emotion Scales

The empirical study required participants to give information about their emotions towards selected products. To enable this, an emotion-scale was created in relation to the reviewed literature.

The review of the emotion scales used in psychology, marketing and design literatures, with particular attention to product evolution, was made in detail in Chapter 2. As there was not a consensus amongst the researchers on which emotion scale should be used, a combination of the emotion sets suggested in various sources, including design (Dormann, 2003; Desmet, 2002), psychology (Bänziger et al., 2005; Scherer, 2005; Youngstrom and Green, 2003) and marketing perspectives (Richins, 1997; Westbrook and Oliver, 1991), was adapted.

The list of emotions provided by Scherer (2005) was constructed the basis for the study. Scherer listed 36 emotions that are chosen from various empirical studies and published surveys. The list of emotions suggested by Scherer was modified to include commonly used ones in similar studies from design, psychology and marketing disciplines. The final set of 19 emotions included:

Admiration, Anger, Boredom, Content, Desire, Disappointment, Disgust, Fear, Happiness, Interest, Joy, Pleasure, Pride, Relief, Sadness, Satisfaction, Shame, Surprise, Tension/Stress.

3.2.6 Venue and Equipment

The study was conducted either in participants' houses or at their offices. Where possible, the participants were invited to the researchers' office. A typical session took between 10 to 25 minutes.

A 15.4" screen laptop was used to show product pictures to the participants. At each session the same laptop was used to avoid differences in picture quality (e.g. color and resolution changes). To record the interview sessions, a Philips 512Mb Go-Gear voice recorder was used. The study did not require any other special setting.

3.2.7 Data Collection Methodology

The proposed study required direct user information as it was expected to understand emotions of users as well as the relationship between these emotions and properties of the products. In this study, participants' general ideas about brands, emotions of participants towards brands and products of these brands, and the reasons behind these emotions were investigated. To achieve this, the study was divided into three parts, the order of which order and aims were:

Part 1: Understanding users' general ideas about selected brands

The aim of Part 1 was to have an overall idea about what the participants think about the selected brands and their products. Part 1 was also aimed to understand whether the perception of a brand affects participants' emotions towards the products of that brand.

Part 2: Understanding users' emotions towards brands and products of these brands

The aim of Part 2 was to understand the specific emotions that are felt towards products and the reasons behind these emotions were aimed to be understood in Part 3. The first and second parts were formed as a self-administered questionnaire so that the outcomes could be statistically analyzed, and have about the emotions.

Part 3: Understanding the relationship between the emotions and product characteristics

The aim of the Part 3 of the empirical study was to gather participants' reasons of product emotions that they stated. To understand these reasons, the participants were interviewed during the post-questionnaire session. They were encouraged to talk about why they stated negative and positive emotions, specifically about the highly scored ones.

3.2.7.1 Questionnaire

The self-administrated questionnaire consisted of two parts. (See Appendix C)

The first part of the questionnaire aimed to understand whether participants' prejudgment about a specific brand affects product emotions. The participants were first asked to fill in the demographic information including their age, gender and occupation. Then, they were asked to state their general opinions about the products of the ten listed brands: Arzum, Arçelik, Braun, Fakir, King, Philips, Siemens, Sinbo, Tefal and Vestel. Although only five of these brands were evaluated in the rest of the study, this was to avoid revealing them to the participants. A five-point Likert scale (from 1 indicating 'very bad' to 5 'very good') was used to measure the brand image. The scale also included N/A ('I do not have any idea') for the participants who do not know the products of these brands. Additionally, the participants were asked to indicate whether they used the product(s) of the brand ('I am using / have used').

The second part of the questionnaire aimed to find out the specific emotions elicited by the selected products and whether these emotions were affected by products or brands. At this point, 'order effect' (Krosnick and Alwin, 1992) was taken into consideration. Order effect is a psychological response of people towards things that are shown or experienced. As Krosnick and Alwin explain that

“...items presented early within a research study may establish a cognitive framework or standard of comparison that guides interpretation of later items. Because of their role in establishing the framework, early items may be accorded special significance in subsequent judgments. Items presented early in a list are likely to be subjected to deeper cognitive processing; by the time a respondent considers the later alternatives, his or her mind is likely to be cluttered with thoughts about previous alternatives that inhibit extensive consideration of later ones.” (1992, p. 202.)

As a result, to avoid order effect to affect the results of the study, throughout the study the order of the products were altered in each set, (See Appendix B).

The study was conducted in the participants' native language (i.e. Turkish), therefore the terminology used in emotion sets were translated from English. Translations were cross-checked by research colleagues and where necessary, more than one word is provided for much clear meaning (See Appendix C for the full view of questionnaire).

In order to understand the level of emotions, the set of 19 emotions were evaluated against a five-point Likert scale (1 indicating 'any', 2 'little', 3 'average', 4 'much', and 5 'very much'). For evaluation of products, participants were requested to look at the computer monitor for the product pictures and, fill out the emotions questionnaire sheets. The evaluation process started with the first product, and continued until all the five products were scaled.

3.2.7.2 Post-Interview

After the completion of the questionnaire, the participants were interviewed about the grades that they gave to the emotions, where a list of questions asked to the participants. These questions included;

Which quality or qualities of this product make you feel *boredom*?

Why have you scored the *positive emotions* higher than the *negative ones*?

What are the reasons behind these emotions?

The aim was to understand the relationships between the properties of the products and emotions of the participants towards these products. Participants were asked to talk about the reasons of emotions that they specifically gave very high or very low scores.

3.2.7.3 Study Procedure

Each session with each participant was carried out separately. The following procedure was used for each session.

- Participants were introduced to the study with an introduction sheet describing the aim and the procedure of the study.

- Participants were asked for permission to make voice recording during the study. Voice recording was started (if consent was given).
- The questionnaire was administered to the participants. Participants were explained that there were no correct or incorrect answers in the questionnaire. (as described in section 4.2.6.1).
- On the completion of the self-administered questionnaire, participants were asked a set of questions at the end of each session. The questions aimed at understanding the concerns of participants behind the graded emotions (as described in section 4.2.6.2).
- Participants were thanked and were offered a small gift for their participation.

CHAPTER 4

RESULTS AND ANALYSIS

In this chapter, results and analysis of the study are presented. The data analyses were undertaken separately for each of the product groups, then being cross-compared with the findings for each group.

In the following sections, first the data analyses procedure including statistical analyses of brand and emotion scales, graph analyses and content analyses are presented. Following this, the results of the data are presented in two parts. First, users' ideas about selected brands are presented. The aim of this part is to understand the relationship between the emotions of users and brand awareness. This part also presents how the participants graded the given brands. The results of this part are associated with the outcomes of the emotion evaluation part of the study with the aim to understand how pre-knowledge of participants affect emotions towards products of these brands. Dimensions of emotions of participants are analyzed based on the grades of the participants. The aim was to elicit information about possible relations between: i) brands that form certain impressions of and our emotions towards irons bearing their brand name; and ii) the changes in negative/positive emotions associated with each iron across the three groups. The analysis of emotions of participants also associated with the results of interview part of the study in which the reasons for these emotions are revealed.

4.1 Data Analyses Procedure

Data collected during the study is analyzed under three headings: statistical analyses of brand awareness and emotion scales; graph analyses; content analyses. The following parts explain these procedures.

4.1.1 Statistical Analyses

Statistical analyses are used to evaluate the data collected in Part 1 (brand awareness) and Part 2 (emotions) of the questionnaire is processed separately. The aim of making statistical analyses was to understand the relationship between products and emotions with the data collected from the questionnaire.

First, the overall grades of the 105 participants for five brands were analyzed using SPSS software, with the descriptive analyses function of SPSS software. This helped revealing the participants' general views of the products for the selected brands (See Appendix E for full data set). Analysis of this part helps to understand whether there were any relation between the emotions of participants towards brands, products of these brands and the opinions of participants about these brands.

Following this, emotion evaluation part of the questionnaire is analyzed. To understand the degree of reliability of the questionnaire, reliability analyses were made. These analyses show the consistency of the scales. Reliability analyses showed how the reliability of the questionnaire changes when one of the emotions is excluded from the questionnaire. The analyses for each item were done, and the analyses showed that reliability of the emotion questionnaire is between 80% to 84%. It should be indicated that a questionnaire can be accepted as reliable when the minimum reliability range is 60% (Tavşancıl, 2002). Accordingly, reliability of the questionnaire was very high and results of the questionnaire were reliable (For the full set of data, see Appendix D).

After the reliability analyses of the emotion scale, analyses for the emotions were made, with the following aims.

- To categorize emotions,
- To find out relationships between positive and negative emotions stated by the participants for each product,
- To make comparison between the emotions of participants towards each product individually,
- To study emotions towards the products in each product set Original-O, Mixed-M and None-N.

According to these, the emotions were categorized through two dimensional cluster analyses using SPSS software. This was to show which emotions were relatively close to each other and which were apart. Then, one-way ANOVA (analysis of variance) and post hoc tests functions of SPSS software was used, to analyze emotion reports of the 105 participants, showing the statistically significant differences between emotions. It was possible to observe statistically significant differences for three of the irons, for a number of emotions; the mean difference is taken 0.05 as base. However, the aim of the study is not to find out the emotions that create statistically significant differences only. Accordingly, to find out the differences that would be meaningful to discuss, 0.03 have been decided to be used as a threshold mean-difference value. (For the full set of data, see Appendix E). In the following sections, the differences between O and M, and O and N will be discussed by taking the original set base, and M and N will be excluded.

4.1.2 Graphs Analysis

To visualize the statistical data processed in SPSS software, Microsoft Excel software was used. The graphs were created for brand awareness analyses, and emotions analyses. The reason for creating the graphs was to see the understand the level of relationship between emotion and branded or non-branded products.

First, the brand awareness results were created according to the descriptive statistics analyses. The questionnaire consisted of ten brands and the graph analyses included all these brands. However, the brand names that were related to the analyses of emotion evaluation were presented as 'bold' in graphs.

Following this, the results of emotion analyses were illustrated. The emotions were categorized, according to their relevance to one-another. To illustrate categorized emotions, two dimensional emotions clusters and dendogram of emotions were created. In relation to these, positive and negative emotions graphs for each of the three product set (O, M and N) were created, in relation to reports of 105 participants. Then, with the data collected from the emotion evaluation part of the questionnaire, an emotion graph set was created for individual products (Iron 1 to Iron 5), which is named as product specific results, and shown in Table 4.1. Finally, another emotion graph set was created to visualize emotions of 105 participants within each product set (O, M,

and N), which is named as product set specific results. Table 4.1 illustrates what the emotion graphs analysis includes.

Table 4.1 Emotion Graph Analysis

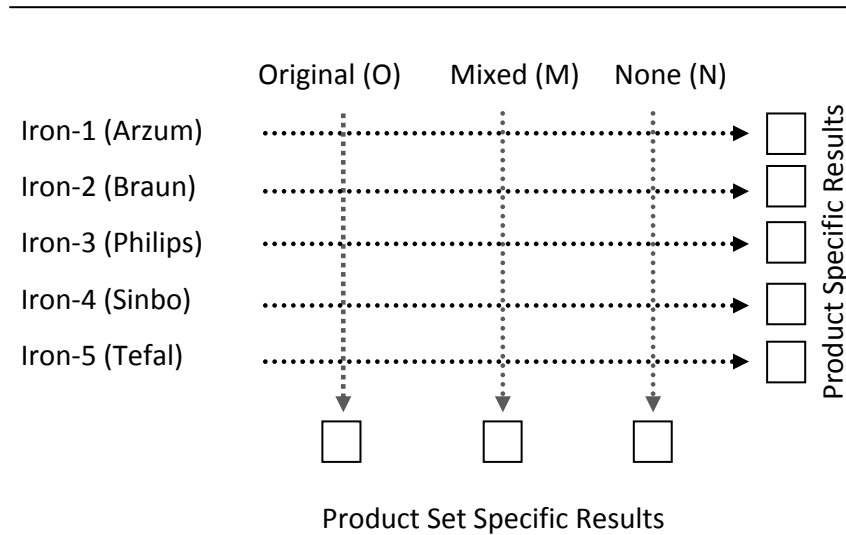


Table 4.1 summarizes the types of emotion graph analyses. The horizontal lines illustrate what the product specific results constitute. In product specific results, each product was analyzed individually for each product set (O-M-N) and one graph for each product was created. These analyses consist of five graphs. The vertical lines explain content of the product set specific results. In product set specific results, each product set was analyzed within itself covering all the products under original, mixed and none sets. Product set specific results consists of three graphs.

4.1.3 Content Analysis

The statements that were declared by all participants as the reasons of emotions were content analyzed and categorized into four main groups. The groups included the qualities of the products related to brand, emotional qualities, function-usability qualities and visual qualities. Examples of keywords that are listed in each group can be seen in Table 4.2. The full version of the data set can be seen in Appendix F.

Table 4.2 Categorization of participants' statements in relation to product qualities

Category	Keyword Examples
Brand Related	Being aware of the brand
Emotional Related	Cute, fun, ugly, dislike, feminine, masculine
Functional-Usability Related	Security, seems to be functional, controls Easy to handle, easy to use, seems ergonomically
Visual Related	Color, form, design, technological look, simplicity

Following sections will present the discussion on the analysis of the study in two parts. First the analysis of the brand awareness of the study will be explained and following, analysis of the emotion evaluation of the study will be explained.

4.2 Brand Awareness

The results of brand awareness results of 105 people can be studied in Figure 4.1.

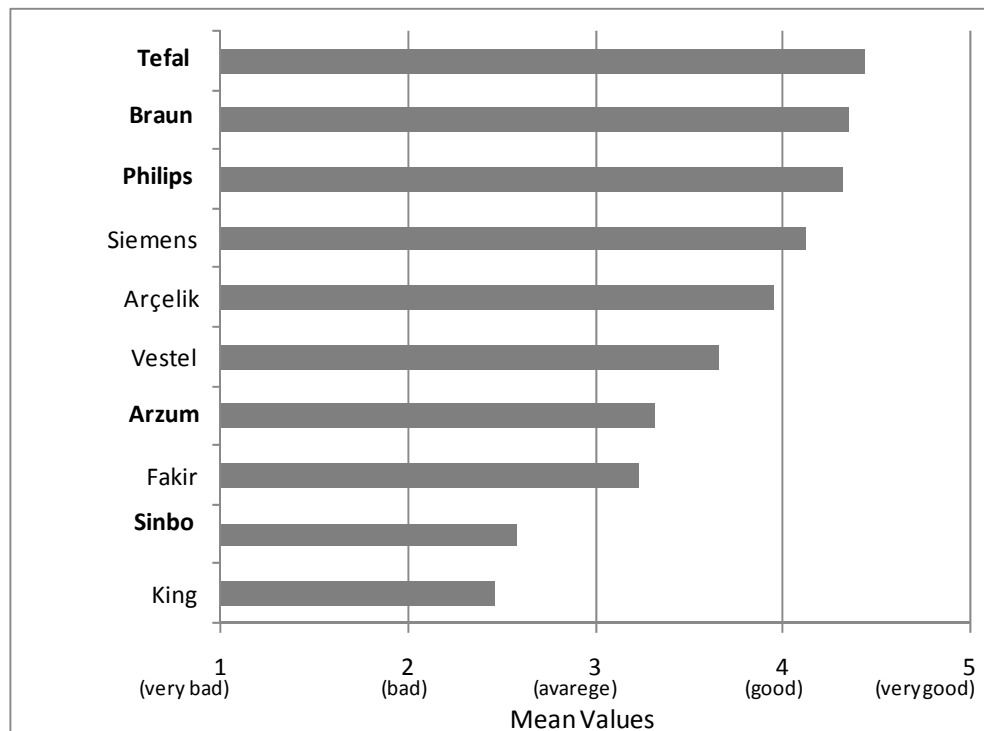


Figure 4.1 Brand Awareness Results

Figure 4.1 shows that mean values for four of the brands (i.e. Tefal, Braun, Philips and Siemens) are between 4 and 5. The following four brands (i.e. Arçelik, Vestel, Arzum and Fakir) are scored between 3 and 4; the first two are closer to 4. Mean values of the remaining two brands (i.e. Sinbo and King) are between 2 and 3. None of the brands are scored between 1 and 2.

As stated before, products of the brands seen in bold in Figure 4.1, are employed in the emotion evaluation part of the study. Within these, *Tefal*, *Braun* and *Philips* are scored highly, with the average scores ranging; Tefal 4.4412; Braun, 4.3626; Philips, 4.3301. *Arzum* is scored 3.3171, showing that products of this brand are scaled between average and good. *Sinbo* is graded lower than the others with 2.5882 mean value, indicating that products of this brand is regarded as neither bad nor average, between these two.

4.3 Emotion Evaluation

The emotions of participants towards products and brands were revealed in Part 2 of the questionnaire. The analysis of this part was based on the comparison of the emotions of participants towards selected products between the sets of original-mixed and original-none. Before product specific results and product set specific results, categorization of the emotions and positive and negative emotions towards products will be explained.

4.3.1 Categorization of Emotions

Throughout the study, positive and negative emotions were presented together in an alphabetical order; however, these emotions were categorized to visualize the relationship and relative distance of the emotions. Figure 4.2 and Figure 4.3 show the *emotions clusters* and *dendogram* respectively.

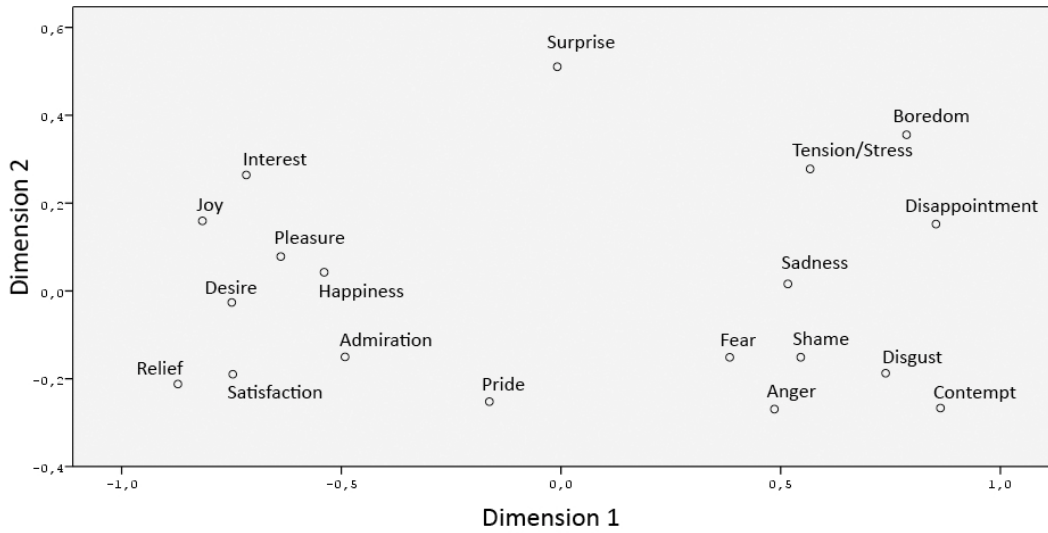


Figure 4.2 Two Dimensional Emotion Clusters

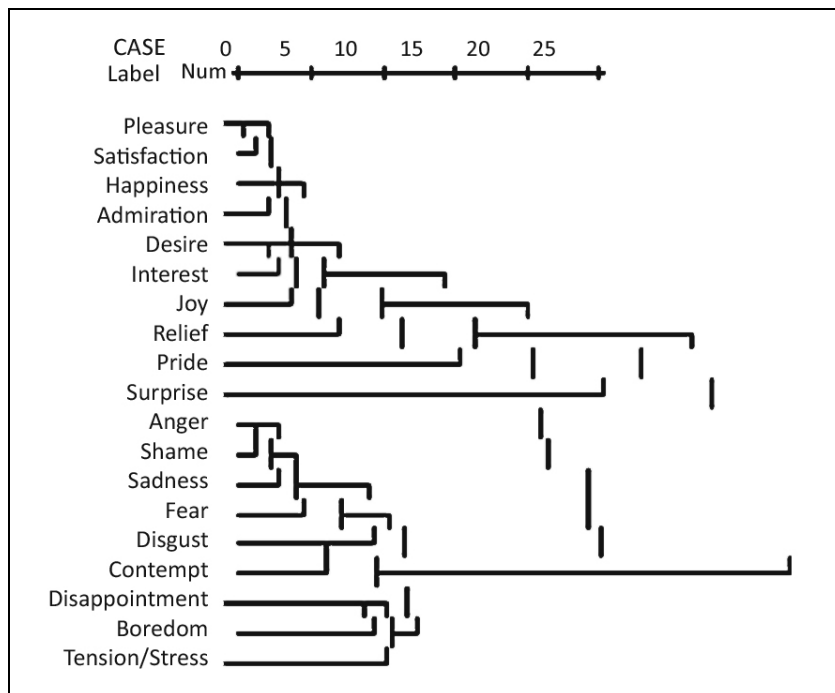


Figure 4.3 Dendrogram of Emotions

Figure 4.3 shows the distribution of emotions and Figure 4.3 shows the relationship of each emotion with others. It can be seen in the figures that, the first set of emotions consists of positive emotions '*pleasure, satisfaction, happiness, admiration, desire, interest, joy, relief, pride*' and these emotions are close to each other respectively. The second set of emotions consists of negative emotions '*anger, shame, sadness, fear,*

disgust, contempt, disappointment, boredom, and tension/stress and similar to positive emotions, the order of emotions shows the level of closeness to each other. The third set only consists of *'surprise'*. Surprise can have both positive and negative connotations in Turkish, whereas in English this difference can be emphasized by the use of *'positive surprise'* and *'negative surprise'* (Scherer, 2005). It can be argued that participants might have treated surprise both positively and negatively, and this might have resulted in a differentiation in emotion groups. Therefore, for the further analysis, *surprise* will be segregated from both positive and negative emotions sets, and will be discussed separately.

4.3.2 Emotions towards Products

In this section, first analysis of the emotions in positive and negative levels, then analysis of the emotions towards each product and within each product set will be presented.

Positive Emotions

In Figure 4.4, an overview of mean values of positive emotions towards each iron by 105 participants can be seen.

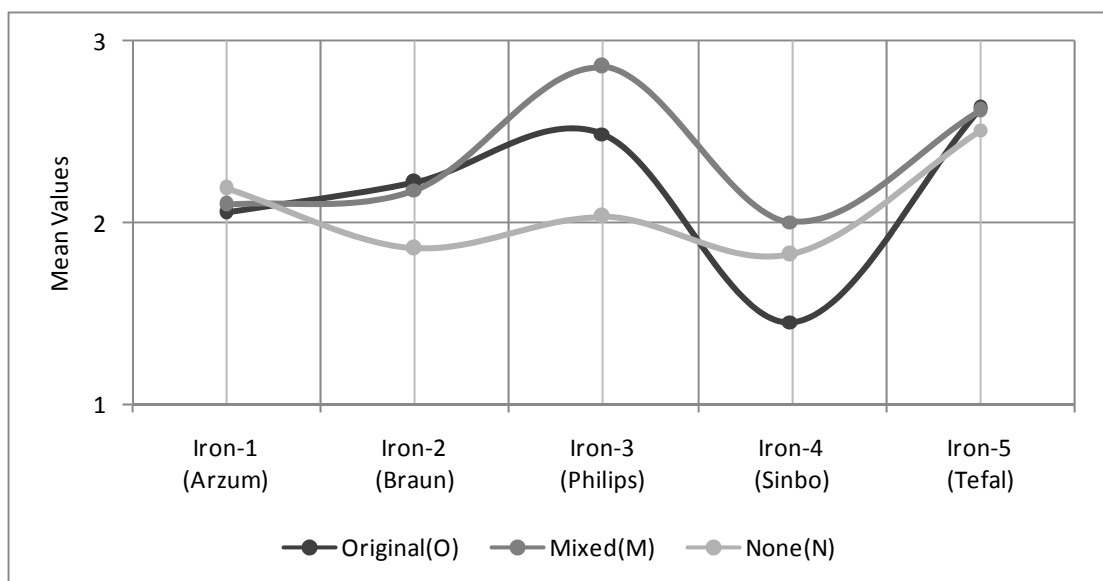


Figure 4.4 Mean values of positive emotions for each of the iron by 105 participants

As can be seen in Figure 4.4, the mean values of positive emotions towards each product are below 3-point level and the emotions ranging between 1-point and 3-point levels. The lines move apart from each other mostly for Braun, Philips and Sinbo irons.

In the figure, the first difference that stands out is that positive emotions towards iron-3 (Philips) in M set, labeled as Tefal, has the highest score; however, the score is not that high for this product in O set. The same iron gets lowest positive emotions score when there is no brand name is on.

Similarly, the iron-4 (Sinbo) in M set, labeled as Braun, gets higher score than any other case for this product. However, it gets the lowest positive emotions score in N set. The iron-2 (Braun) gets a lower score than O and M sets when there is no brand name on. However, the same iron gets similar scores when there are both original and mixed brand names.

The iron-1 (Arzum) and iron-5 (Sinbo) receives approximately similar scores in all three cases (See Appendix E for the full data set).

Negative Emotions

In the Figure 4.5, an overview of mean values of negative emotions towards each iron by 105 participants can be seen.

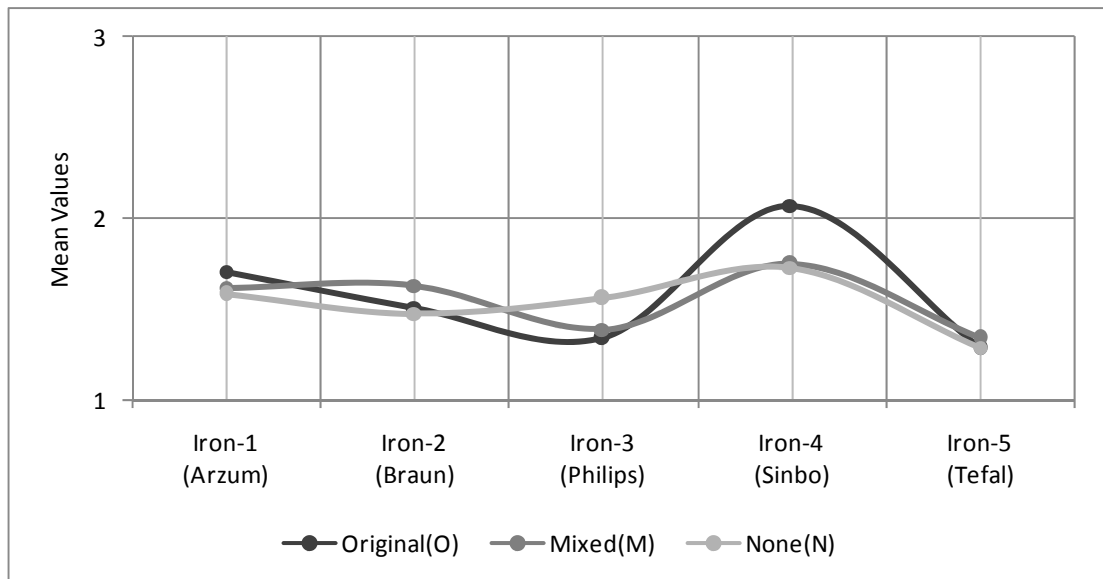


Figure 4.5 Mean values of negative emotions for each of the iron by 105 participants

The distributions of the lines in Figure 4.5 are not as flexible as Figure 4.4. In general, the lines are between 1-point and 2-point levels. The only point the lines go above the 2-point level is for product of Sinbo brand with original brand name.

Figure 4.5 shows that the distribution of negative emotions is relatively less than the positive emotions. In other words, the participants mentioned more positive emotions towards each iron than negative emotions. The lowest negative emotion scores are shown for iron-5 (Tefal) with original brand name. The levels of negative emotions for iron-1, iron-2, iron-3 and iron-5 have similar tendencies. In this group, the only difference can be seen for iron-4 with original brand name. This product gets the highest negative emotions score among other products. (See Appendix E for the full data set).

Overall, it is observed that positive emotions are scored much higher than negative emotions. However, the level of positive emotions is still below 3-point level. One explanation could be that ironing is not a very exciting task. For this reason, participants might not have stated their positive emotions as intensively as negative ones.

4.3.3 Product-Specific Results

In the following parts, emotions of the participants towards each iron will be analyzed. The emotions are categorized in relation to the outcomes of the previous positive-negative emotions analysis, as represented in Figures 4.4 and 4.5 to find out emotion differentiation between O-M and O-N sets. Changes in emotions for each iron will be discussed, accompanied with line graphics. Earlier in this section, emotions towards irons were analyzed on the positive-negative level excluding 'surprise' from the emotions; however surprise will be included in this part.

Analyses for each product will be presented under graph analysis and content analysis sections. A brief discussion for each product will be made at the end of the section of each product. The graph analyses will be used to understand the emotional differences between O-M and O-N sets, by taking the original product set as base. As stated in 4.1.2, the emotions will be discussed based on the criteria that the mean-difference value between sets, either O-M or O-N, is more than 0.03. Content analyses will be used to support the data presented in graph analysis sections. To understand the reasons behind the emotions towards each iron, all statements collected during the interview from 105 participants' statements, were content analyzed as explained in 4.1.3 (See Table 4.3) (For all statements, see Appendix F).

4.3.3.1 Analysis of Iron-1 (Arzum)

Graph Analysis of Iron-1

Figure 4.6 shows the distribution of all emotions for iron-1 declared by 105 participants in O, M and N sets.

When the Figure 4.6 is explored, changes in all three emotion groups (positive, surprise and negative) follow a similar fashion within each product set. For each set, the flow of emotions line changes between 1-point and 3-point levels. Within these, the positive emotions are mostly above 2-point level and negative emotions are below 2-point level mostly. In general, positive emotions are elicited mostly by N set and less by M set. For each set, the flow of emotions line changes between 1-point and 3-point levels. Within

these, the positive emotions are mostly above 2-point level, and negative emotions are mostly below 2-point level.

The difference in the level of emotions at some points draws the attention. Within the emotions, *interest*, *anger*, *disgust*, *contempt*, *disappointment* and *boredom* are differentiated from others. Within these, the difference for interest, anger and contempt emotions are observed between O and M sets, interest and anger are high for O set, and contempt for M set. Difference in *disgust*, *disappointment* and *boredom* emotions are observed between O and N sets; disgust and disappointment are higher for O set, and boredom for N set.

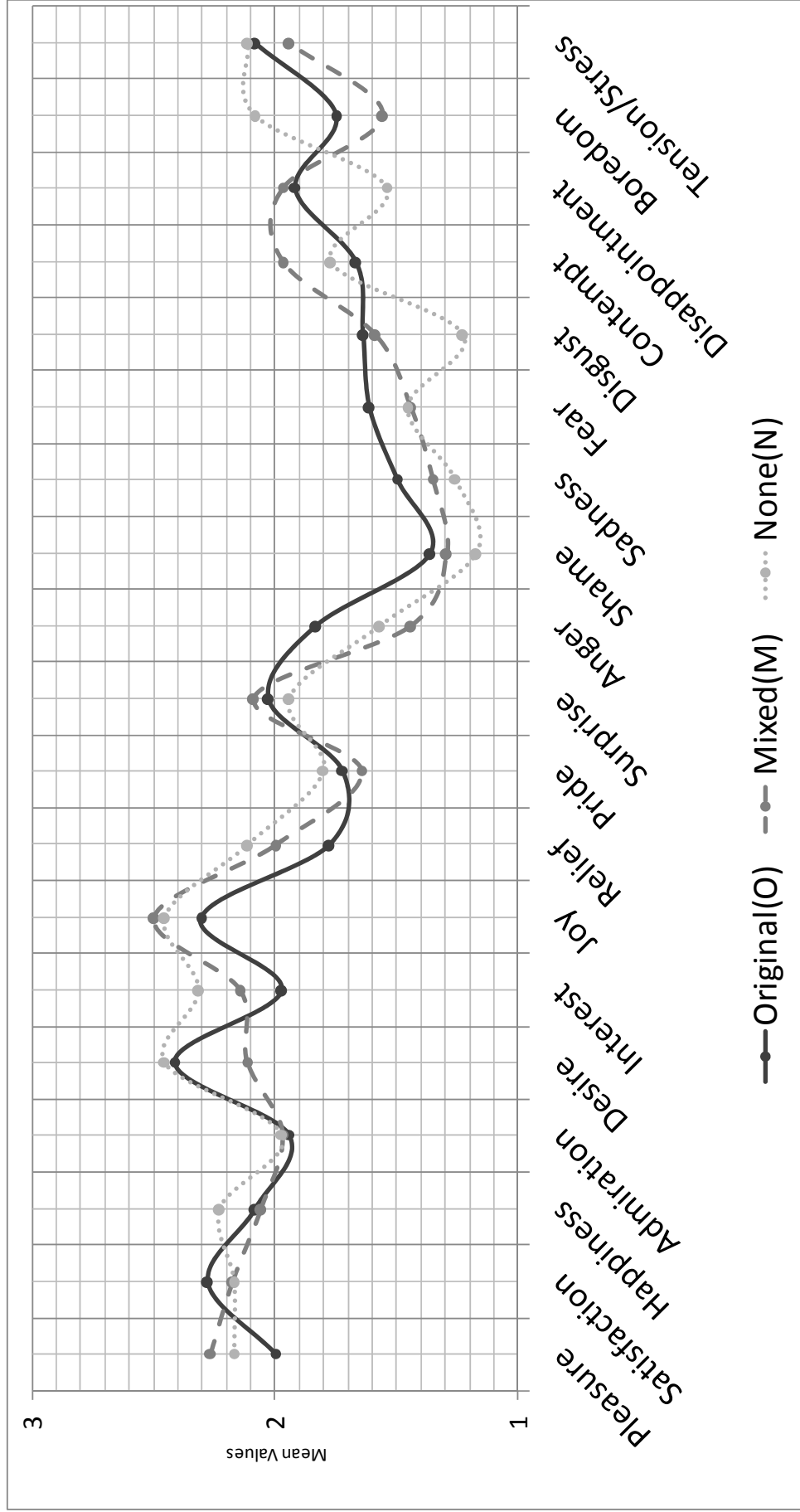


Figure 4.6 Analyses of Emotions towards Iron-1 (Arzum; Sinbo brand in M set)

Content Analysis of Iron-1

Table 4.3 below shows the content analysis results of iron-1.

Table 4.3 Number of participants (over 35) talked about the qualities of Iron 1

	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
brand	4	3	5	12	0	0
emotional	9	3	5	1	3	1
functional-usability	4	5	1	2	4	3
visual	19	18	14	19	19	14

(+) positive statements; and (-) negative statements

As can be seen in Table 4.3, visual qualities of the iron are more become dominant in the statements of participants. Number of participants who talked about the **visual** qualities as positive and negative does not have a discrete difference. Moreover, it can be seen that the number of participants talked about the visual qualities are higher than those mentioned about other qualities. When the visual qualities are explored in depth, it is observed that participants talked about the *color*, especially *base color*, of the iron-1 more than other visual qualities like *form* and *being old fashioned* in all series. For this product, participants mentioned about *base color* of the product as having negative effect.

It is seen that the participants, who were shown M set, mentioned about the **brand** of the iron more than the participants who were shown O set. 17 of the participants mentioned about brand of the iron-1 who saw the M set and 12 of them mentioned about the brand negatively.

The participants also mentioned about **emotional** qualities like *being fun and cute*. These statements were mostly declared to have positive effect. These qualities were declared as positively by 9 of the participants of O set, and by 5 of the participants of M.

Functional-usability qualities of the product like *function of control buttons* and *being functional* were also declared by 9 of the participants of O set, 3 of the participants M

and 5 of the participants of N set. Within these statements, the number of participants who talked about these qualities negatively is slightly higher than those who mentioned about these qualities positively. In general, these qualities have negative effect on participants of O and M set; positive effect on participants of N set.

Discussion on Iron-1

According to the Figure 4.6 most of the emotions towards this product are below the 2-point (less) eliciting level and N set has relatively more positive effect on the participants than O and M sets. Also, *interest* was elicited more in N set than in O set and *disgust and disappointment* were elicited less in N set than in O set. This can be connected to the negative effect of brand. Although the participants saw the same product, the ones who did not see any brand name on the product, mentioned about the positive effect of visual qualities while participants of O set mentioned about these qualities negatively.

Apart from the listed emotions, *anger* was more elicited in O set than other sets. However, the reason behind this emotion was declared to be the color of the product mostly. Here it can also be said that, what made the level of *anger* emotion close to the 2-level in O set, is also affected by the brand of the product negatively as much as the visual qualities. The color and base of the iron 1 is red which was associated with *anger, fear and hotness* by some of the participants.

As seen in Table 4.3, the statements of participants about *brand, emotional and visual qualities* draw a positive picture for O set. However, the number of participants who mentioned positively about these qualities is slightly higher than those who mentioned negatively. These qualities can be related to emotions of participants in the sense that the level of positive and negative emotions towards this product in O set was similar.

As stated before, the positive emotions were more elicited by the iron-1 in N set. When the statements of participants were analyzed, it was seen that number of the declaration of visual qualities are higher in positive column. As a result, not seeing a brand name may have affected emotions of participants positively. Not seeing the

brand name may have also affected the perception of participants, as visual qualities of the product like form and color have positive effect on emotions for N set.

Here it can be argued that, the *color* of the product may make the product both positive and negative. Using *red color* in iron, which is also *hot* in usage context, may have resulted in negative emotions; however, the number of participants who were affected by the *color* of the iron positively is also high.

As explained in 4.3.1, brand of O was scored better than brand of M. This can also be related to the perception of participants, and why they mentioned about brand of M negatively while explaining the reasons of emotions. Seeing a brand name in general, may have affected the emotions of participants of O and M sets negatively as participants who did not see any brand name talked about visual qualities more positively.

4.3.3.2 Analysis of Iron-2 (Braun)

Graph Analysis of Iron-2

To explore all the emotions towards iron-2, Figure 4.7 shown below, illustrates the distribution of all emotions of 105 participants of O, M and N sets.

When Figure 4.7 is explored, all three emotion groups (positive, surprise and negative) follow very different fashion for each product set. The level of emotions in each set differs between 1-point and 3-point lines. For these sets, levels of negative emotions are below 2-point line at most of the points. For O and M sets, levels of positive emotions are above the 2-point line mostly, like *surprise* emotion and have similar fashion. However, for N set, positive emotions do not have a regular distribution; mostly the level of positive emotions is below 2-point line except *happiness*, *desire* and *joy*.

When the emotions towards iron-2 are explored, the differentiation in distribution of emotions can be observed in positive and negative emotions in the sense that positive emotions are elicited more when in N set. When the analysis for the second iron is

explored, the only *disappointment* emotion comes into prominence out of SPSS analysis (full data is shown in Appendix E), as the only statistical differentiation is observed between O and M sets which can be observed Figure 4.7. It shows that the participants are disappointed with the iron when there is Philips brand name M is on the iron; the *disappointment* level is at minimum when there is original brand name is on the iron.

Within all emotions, *pleasure, satisfaction, admiration, joy, relief, pride, sadness, and fear* also draw attention in this figure as the mean-difference value is more than 0.03 for these emotions, for O-M and O-N sets. The positive emotions, *pleasure, satisfaction, admiration, joy, relief, pride*, are seen to be elicited less in N product and more in O set. The negative one, *sadness and disappointment*, are less elicited in O and more in M set, like the *disappointment* emotion.

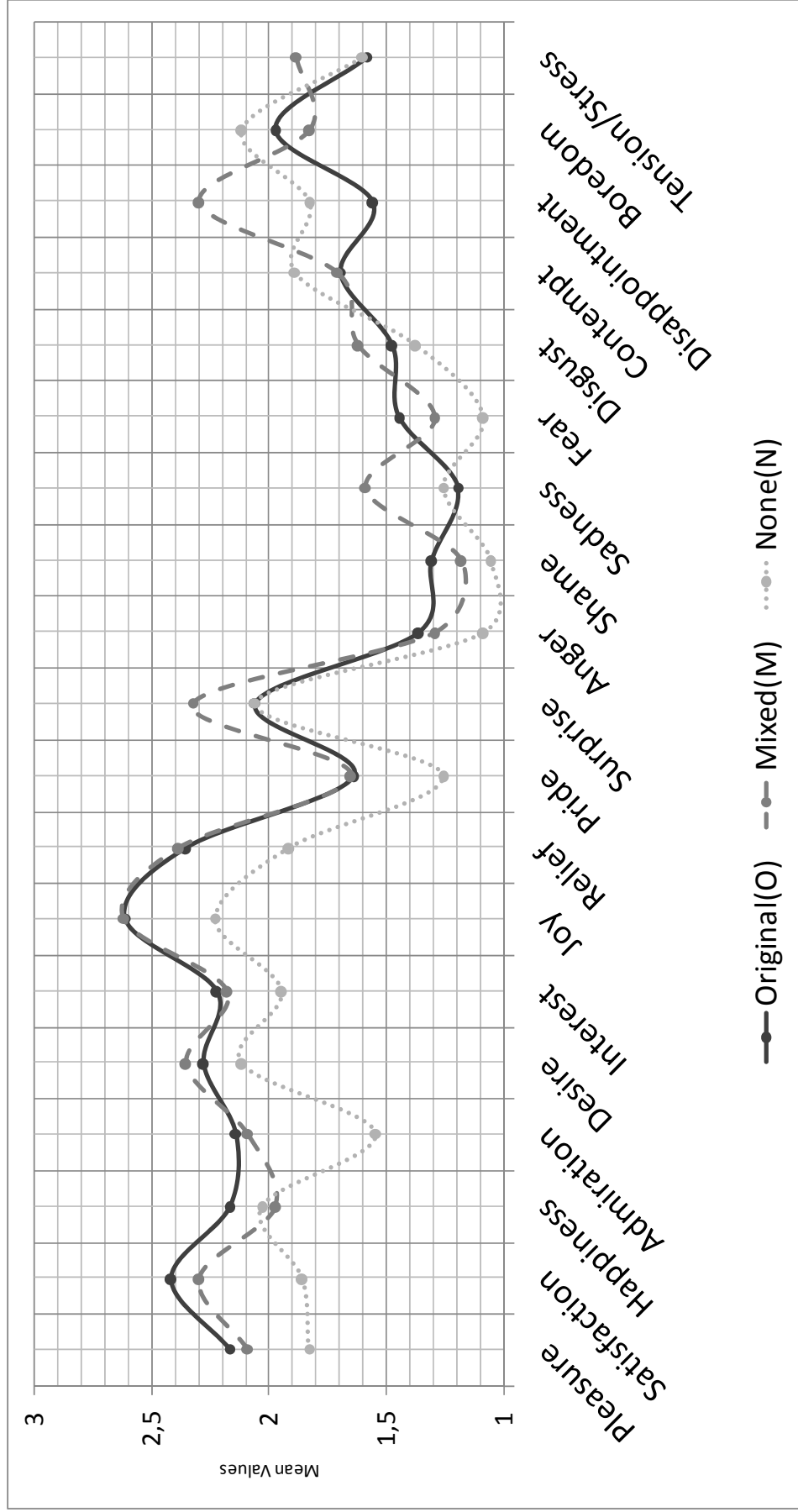


Figure 4.7 Analyses of Emotions towards Iron-2 (Braun; Philips brand in M set)

Content Analysis of Iron-2

Table 4.4 shows the content analysis of iron-2 (detailed information is shown in Appendix F).

Table 4.4 Number of Participants (over 35) talked about the qualities of Iron 2

	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
brand	8	1	12	0	0	0
emotional	8	4	4	2	3	2
functional-usability	4	8	6	6	4	5
visual	19	17	16	19	9	23

(+) positive statements; and (-) negative statements

As can be seen in Table 4.4, visual qualities of the product become dominant in the statements of participants. Number of participants who talked about the **visual** qualities as positive and negative have discrete difference in N set only, as seen in the table. Moreover, it can be seen that the number of participants who talked about the visual qualities are higher than those who mentioned about other qualities, like the iron-1. When the visual qualities are explored in depth, it is outstanding that participants talked about the *color*, *general appearance* and *form* of the iron-2 mostly. (For all statements see Appendix F). For this product, participants mentioned about visual qualities of the product as having negative effect in M and N sets.

It is seen that the participants, who were shown M set, mentioned about the **brand** of the iron-2 more than the participants who were shown O set. 12 of the participants mentioned about brand of the iron-2 who saw the M set and all of them mentioned about the brand positively as well as the 8 participants of the O set.

The participants also mentioned about **emotional** qualities like *being fun and cute*. These statements were mostly declared to have positive effects. These qualities were declared as positively by 8 of the participants of O set, 4 of the participants of M and 3 of the participants of N set.

Within these statements, the number of participants who talked about **functional-usability related** qualities negatively is higher than those who mentioned about these qualities positively. Functional qualities of the product like *function of control buttons, ergonomics, easy to handle and use* and *being non-functional* were declared to have negative effect on the participants.

Discussion on Iron-2

Within all sets, the positive emotions were elicited less by the N product and visual qualities of the product (*form, color, being old fashioned and general appearance*) and functional-usability qualities (*controls and being non-functional*) have negative affect on the participants. Although emotional qualities have positive effect, but could not overcome the negative effect of the product. At this point, it can be said again that seeing a brand name, that the consumers think that products of the brand are good (Braun or Philips), on the product may affect the emotions of participants positively, even though they do not like the visual qualities of the product. This does not mean that the only important point is the brand name, as in the O product, brand name was not mentioned as much as the visual qualities.

As brand has positive effect in O and M cases, seeing the brand name on the product may have affected the participants positively even though participants of M set mentioned negatively about the visual qualities of the product. Brand name may have also affected the emotional qualities (*being fun and cute*) and function-usability (*easy to use and handle*) as the M and O brand of the iron was scored between *good and very well (4 to 5)* in brand awareness questionnaire.

It is surprising that the significant differentiation in was observed between M and O sets. It is surprising because both Braun O brand was scored slightly better than Philips M brand in the brand awareness questionnaire. This can be related to the visual and functional qualities of the product as both were mentioned negatively by participants of M set. It can also be said that participants of M set, did not expect the Philips brand to produce this product; they may have been disappointed by the brand and visual qualities of the product both.

4.3.3.3 Analysis of Iron-3 (Philips)

Graph Analysis of Iron-3

Figure 4.8 shows the distribution of all emotions for iron-3, according to the reports of 105 participants, in O, M and N sets.

When the Figure 4.8 is explored, all three emotion groups (positive, surprise and negative) follow a similar fashion within each product set. However, the positive emotions attract attention for this product as levels of positive emotions change for each set. Unlike the previous examples, levels of some of the emotions towards this product are above 3-point line. However, the negative emotions are below 2-point line for approximately all sets and some of them are near the 1-point line. The line graphics shows that the participants have told to feel positive emotions at highest level in M iron set and lowest level in N iron set, and the vice-versa for negative emotions for this iron. The level of most of the positive emotions towards this product in all cases is between 2-point and 3-point lines, a few more than 3 level; which means that these emotions are elicited between little and average levels. Negative emotions levels are between 1 and 2, close to 1 level, meaning that these emotions are elicited below *little* (2-point) level.

Iron-3 is the iron that statistically significant difference is observed most within the study (The full data can be seen in Appendix E). However, the line graphics also reveal the statistical differences between sets, as the distance between the dots at some emotions are outstanding in Figure 4.8. Statistical analyses show that the iron-3 elicited significantly 8 emotions out of 19; *pleasure, satisfaction, admiration, desire, interest, relief, pride and boredom*, all of which are elicited at minimum level within N iron set. The statistical differentiation is between the M and N sets in all listed emotions; but in *admiration, relief satisfaction and boredom*, there is also statistical differentiation between O and N sets.

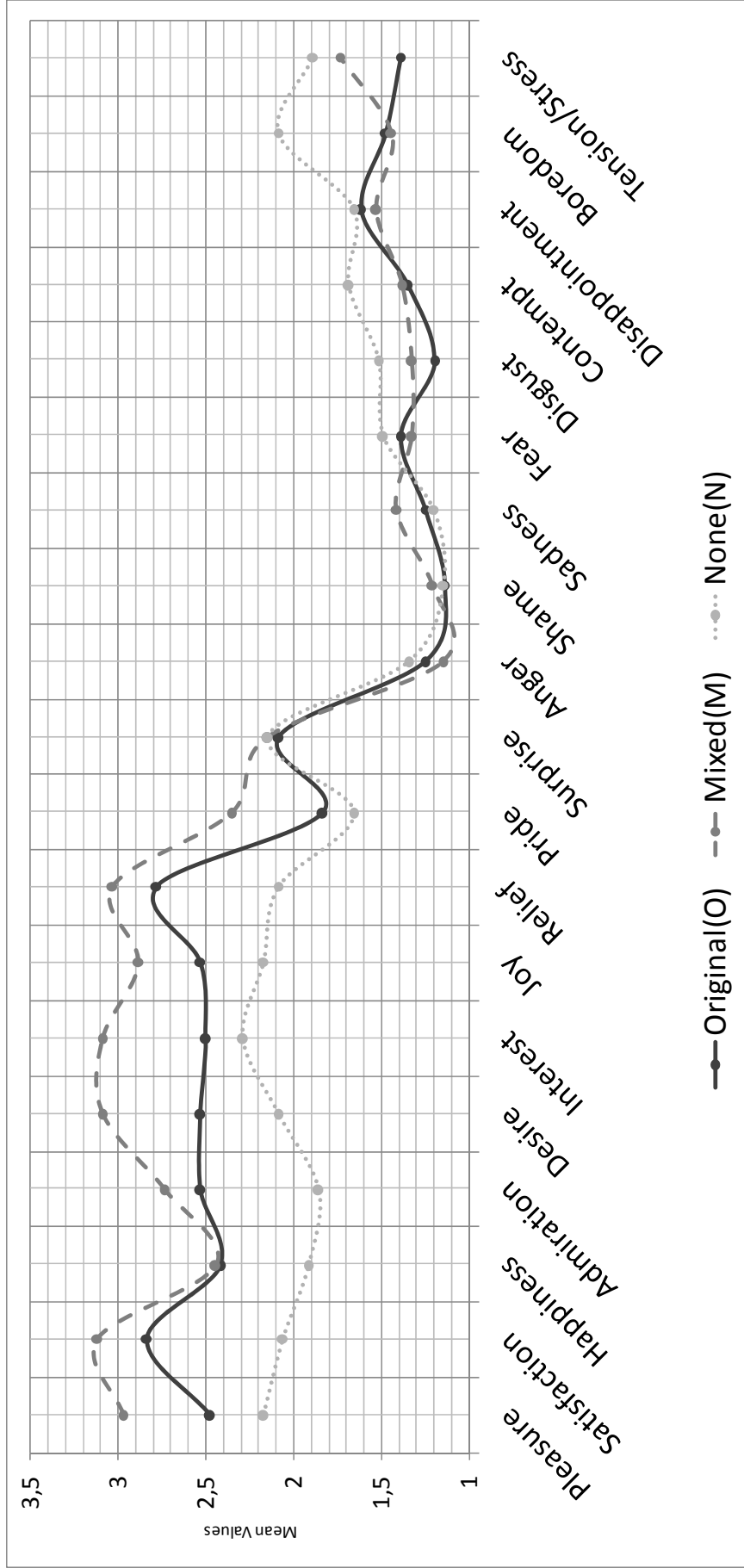


Figure 4.8 Analyses of Emotions towards Iron-3 (Philips; Tefal brand in M set)

Apart from the statistical analyses, differentiation according to threshold level is observed for the emotions, *pleasure, satisfaction, happiness, admiration, desire, interest, joy, relief, pride, disgust, boredom and tension/stress*. Within these, positive ones are elicited by O set, and negative ones are elicited by N set. Parallel to this, difference between O and M sets are observed for the emotions *pleasure, desire, joy, interest, pride, and tension/stress*; all are elicited more within M set than O set.

Content Analysis of Iron-3

Table 4.5 shows the content analysis results of iron-3.

Table 4.5 Number of Participants (over 35) talked about the qualities of Iron 3

	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
brand	6	0	16	0	0	0
emotional	3	1	4	1	1	3
functional-usability	12	2	6	1	2	7
visual	30	5	21	12	12	17

(+) positive statements; and (-) negative statements

Table 4.5 shows that the number of participants mentioned about **visual** qualities is higher than the number of participants talked about other qualities. These qualities were talked about to have positive effect by 30 participants of O and 21 participants of M sets. However, 12 participants of the N set talked about these qualities to have negative effect while 17 of them declared that visual qualities of this product have negative effect on emotions. The visual qualities, *color, form* and *design* of the product were mentioned to have positive effect on the participants. Nonetheless, the visual appearance of the *handle with silvery color* was mentioned to have negative effect on participants.

Brand is seen as positive influential for M and O sets. 16 participants of M set talked about the brand to have positive effect while 6 participants of O set talked about the brand as positive influential. None of the participants said the brand has negative effect.

Participants did not talk about the **emotional** qualities of the product as much as the brand or the visual qualities. The ones talked about these qualities positively said that iron-3 is *fun and cute* and they *liked* the product. However, *disliking the product, not being fun and being masculine* were mentioned to have negative effect on emotions for this product.

Functional-usability qualities were also mentioned. For these qualities, number of participants talked about these qualities positively is more than those who talked about these qualities negatively in O and M sets. In N set, the number of participants talked about functional qualities of this product positively is 2 while the number of the participants talked about these qualities to have negative effect is 6. For these qualities, *function of control buttons, being functional, being ergonomic and easy to use* were declared to have positive effect while being *too complicated and non-functional* were talked about to have negative effect.

Discussion on Iron-3

When the differences between the emotions are investigated, it is seen that the iron with any kind of brand name (O or M), has positive effect on participants, as positive emotions were elicited by O and M sets. The products of the brand in M set and O set was found between *good and very well in the* brand awareness analysis of the questionnaire. It is surprising that although the products of these two brands were found between *good and very well*, the iron in M set has more positive effect. This can also be related to the results of brand awareness as Tefal was found better than Philips.

It was observed that, *disgust, boredom and tension/stress* were elicited more by N set. When the Table 4.5 analyzed, the number of participants who talked about the visual qualities (*color, design, and form*) of the product positively is more in O set than in N set. Within the visual qualities, the *handle with silvery color of iron* is the part that affected the participants negatively in N set. In relation to these, what makes the iron more *boredom* eliciting in N set may be the visual qualities of the iron, as *color, form and handle with silvery color* was declared to have negative effect, as much as not seeing a brand name on the product.

When the Table 4.5 is explored, it is seen that the number of participants affected by the brand name of the iron in M set is higher than those who were shown O set. Here, it may also be said that the visual qualities of the product have negative effect on emotions when there is no brand name is on for this product. Nonetheless, when there is any kind of brand on a product, which is perceived as good or better, visual and functional qualities have positive effect on participants.

4.3.3.4 Analysis of Iron-4 (Sinbo)

Graph Analysis of Iron-4

Figure 4.9 shows the distribution of all the emotions according to the reports of 105 participants of O, M and N sets.

The lines for this product follow very rough changes; however, the overall emotions rank below 3-point line and at some points, sudden jumps and breaks can be observed. For O set, the curve follows a smooth change for positive emotions between 1-point and 2-point levels; however the negative emotions change between 1-point and 3-point levels. For M set, the line shifts for positive and negative emotions and the curve up and down over 2-point level for both positive and negative emotions. For N set, the positive and negative emotions have breaking points in the curve. As can be seen in the figure, while levels of positive emotions, elicited by this product, are around 2-point level, there comes a break at *pride* emotion. Likewise, a sudden jump can also be seen at *boredom* emotion.

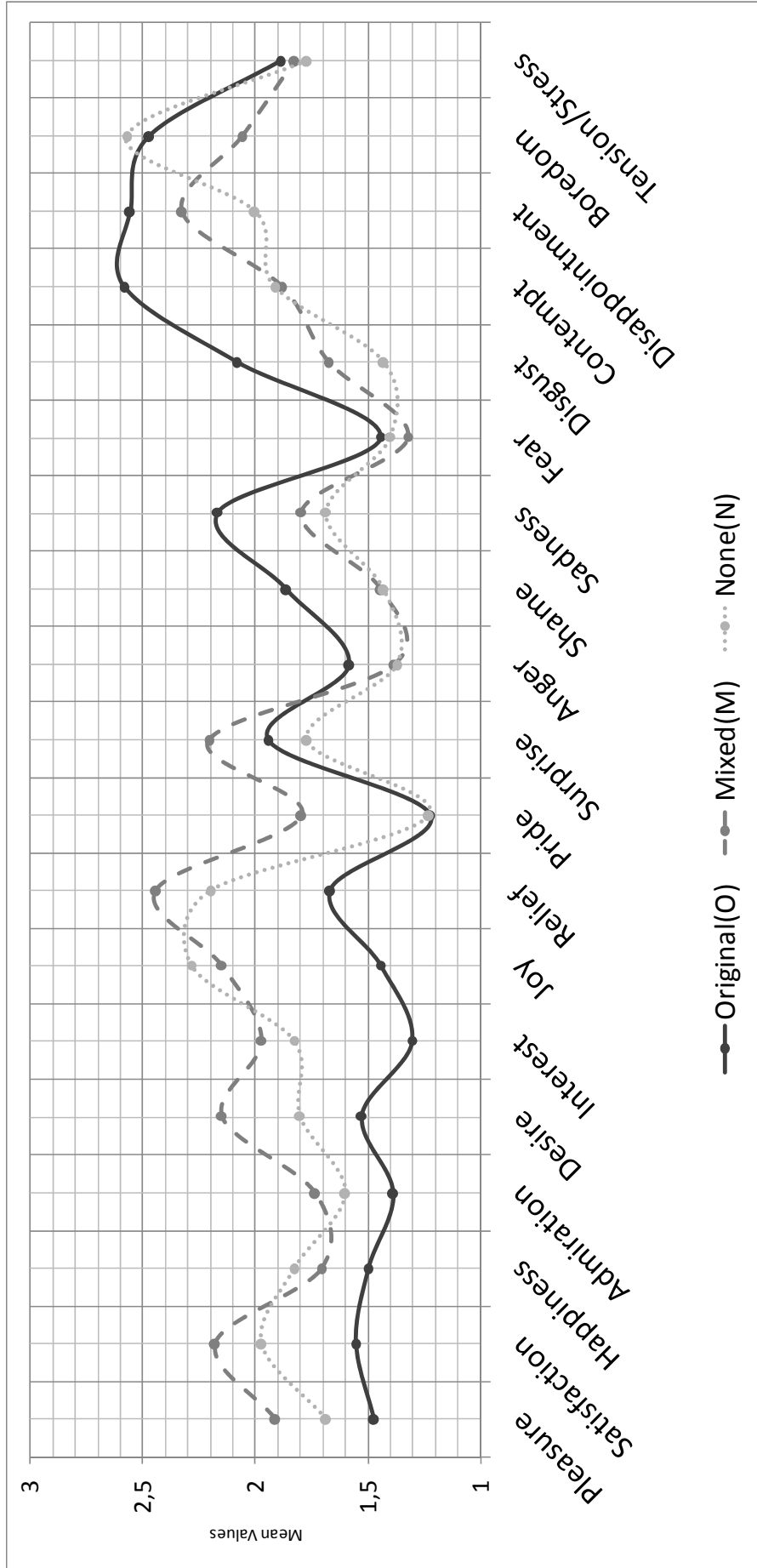


Figure 4. 9 Analyses of Emotions towards Iron-4 (Sinbo; Braun brand in M) set)

In the Figure 4.9, it can be seen that the iron-4 in M set has more positive effect on the participants, than the O set, as all the positive emotions are at almost highest level in M set. The relationship of statistically differentiated emotions, *satisfaction, interest, joy, relief and pride* can be seen clearly on the figure. Analyses show that statistically significant differentiation in emotions for this iron is explored between O and M sets in *desire, joy, relief, pride, satisfaction and interest* emotions, high for M set; between O and N sets in *joy*, high for O. Also, taking the threshold point as base, difference in all the positive emotions are observed between O and M sets; higher for M set. Within the positive emotions, difference between O and N sets can also be observed in *satisfaction, happiness and interest* emotions; all high for N set.

The negative emotions for iron-4 are higher for O set mostly. The relationship of these emotions together with the rest of the emotions can be seen clearly on the Figure 4.9. Within these emotions, the place of the dots in negative emotions, *shame, sadness, disgust, contempt, disappointment and boredom*, draws attention. The levels of these emotions are higher in O set (apart from *boredom* which is slightly higher for N product) and low for M set. What other thing that draws attention for O set is that, the flow of the line of emotions is low in positive part and higher in negative part and at top for *contempt* emotion.

Content Analysis of Iron-4

The content analysis of iron-4 is shown in the Table 4.6.

Table 4.6 Number of Participants (over 35) talked about the qualities of Iron-4

	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
brand	1	14	17	4	0	0
emotional	1	3	1	7	3	0
functional-usability	0	4	4	5	3	6
visual	3	31	8	27	9	25

(+) positive statements,; and (-) negative statements.

The Table 4.6 shows that the number of participants mentioned about **visual** qualities is higher than the number of participants talked about other qualities as the previous

irons. However, unlike other examples, these qualities were talked about to have negative effect on emotions in all three sets. Within the visual qualities, *color, form, material, and design* of the product were mentioned to have negative effect on the participants. Meanwhile, some of the participants said that they found the product *old-fashioned and too simple*.

Brand is seen as positive influential for M set and negative for O set. 17 participants of M set talked about the brand to have positive effect while 4 participants of this set talked about the brand as negative influential. For O set, 14 of the participants said that the brand of O set affects the emotions negatively while only 1 of them mentioned about the positive effect of the brand.

Participants did not talk about the **emotional** qualities of the product as much as the brand or the visual qualities. Number of the participants in M set draw attention as 8 of the participants talked about these qualities while 7 of them said that they did *not like* the product. 3 participants of O set gave keywords like *not fun and dislike* about the product while in N set, 3 participants found the product *fun*.

Functional-usability qualities, like the emotional qualities were not mentioned much by the participants. For these qualities, number of participants talked about these qualities positively and negatively changes for each set. The participants talked about the *controls, quality, handling, hard to use and non-functionality* of the iron-4 in general.

Discussion on Iron-4

Before starting the discussion, it should be noted that the brand shown in M set was scored between 4 and 5 and brand shown in O set was scored between 2 and 3 in brand awareness questionnaire. With this information, the reason for the positive emotions toward M set and negative emotions towards O sets can be explained with the effect of the brands.

Within all sets, the positive emotions were elicited less by the O product and visual qualities of the product (*color, form, material, and design*) as much as the brand of the product have negative affect on the participants. At this point, it can be said that seeing

a brand name, that the consumers think that products of the brand are between poor and average (Sinbo), on the product may affect the emotions of participants negatively. The brand of M was scored between 4 (good) and 5 (very good) in brand awareness questionnaire as positive emotions towards this product were also elicited more by this set. However, for this product, participants in all sets talked about the visual qualities as negatively. This supports the idea that the only important point is not the brand name, brand name affects the emotions, but visual qualities of the product can also become an important emotion-influential factor.

With these discussions, it is not surprising that the significant differentiation was observed between M set and O set mostly when the effect of brand on emotions is concerned. As the statistical differentiations were analyzed, it was observed that the differentiation is seen in positive emotions mostly which can also be related to the positive effect of M brand on emotions.

4.3.3.5 Analysis of Iron-5 (Tefal)

Graph Analysis of Iron-5

Figure 4.10 shows the distribution of all the emotions for iron-5 according to the reports of 105 participants. Figure 4.10 illustrates the overall distribution of emotions.

When the flows of lines are explored, it can be seen that the lines follow similar fashion for all sets; nearly all the positive emotions are located between 2-point and 3-point levels, while all negative emotions are located between 1-point and 2-point levels. The flow of lines changes at some points for different sets.

For this product, no statistical significant difference between the emotions was observed. Nonetheless, within all sets, the emotions *pleasure*, *satisfaction*, *admiration*, *relief*, *contempt* and *boredom* are outstanding in graphs, on the bases of threshold point. The emotions *pleasure*, *satisfaction* and *admiration* have similar fashion; high for O set and lowest for N set. *Relief* and *boredom* emotions have also similar fashions; high for N set and low for O set. However, *contempt* emotion is scaled to be elicited more by M set and less for the iron with O set.

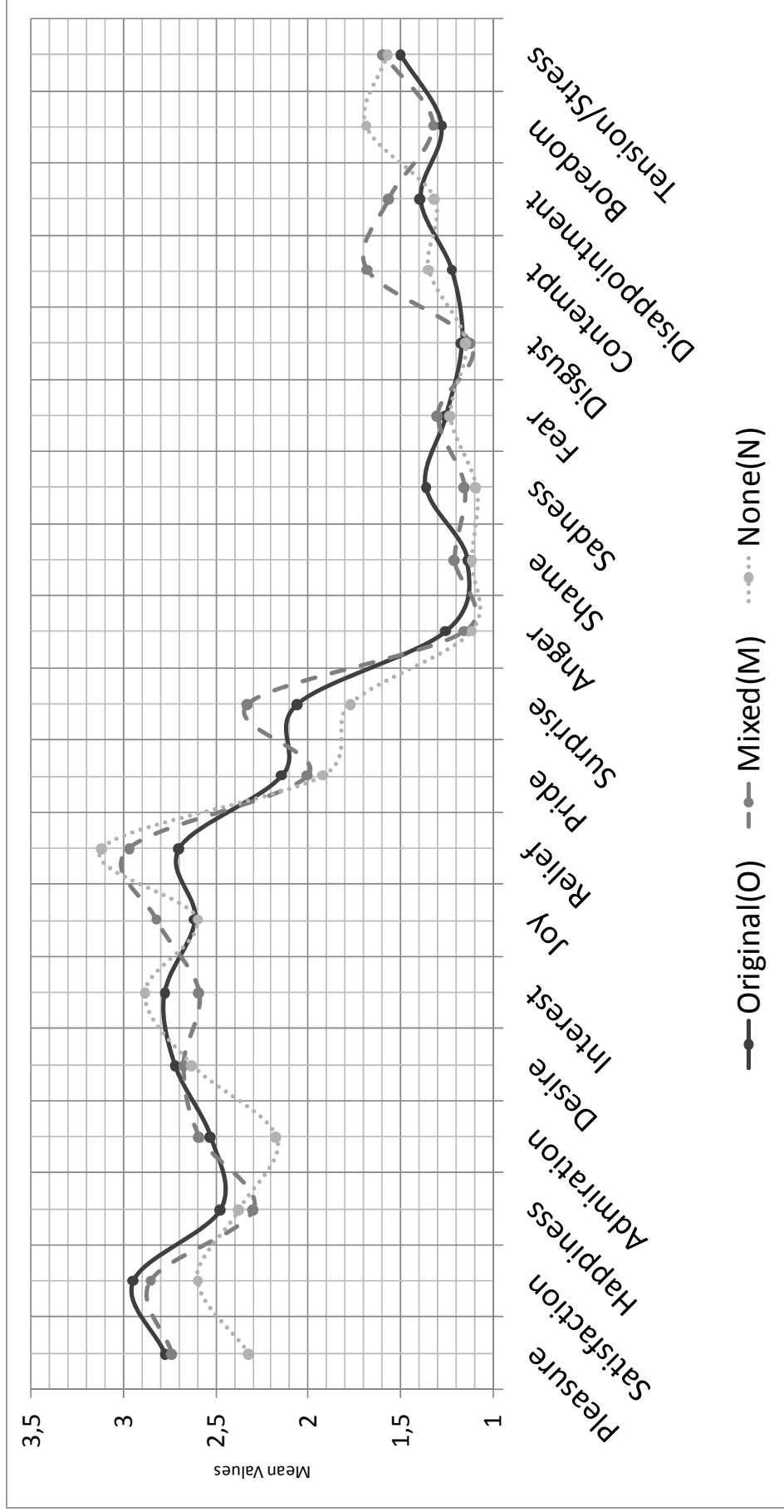


Figure 4. 10 Analyses of emotions towards Iron-5 (Tefal; Arzum brand in M set)

Content Analysis of Iron-5

Table 4.7 shows the qualities of iron-5 stated by the 105 participants.

Table 4.7 Number of Participants (over 35) talked about the qualities of Iron-5

	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
brand	12	2	11	3	0	0
emotional	1	1	7	2	2	1
functional-usability	13	2	6	2	15	1
visual	24	9	23	9	26	6

(+) positive statements; and (-) defines negative statements.

The Table 4.7 shows that the number of participants mentioned about **visual** qualities is higher than the number of participants talked about other qualities as the previous irons, and these qualities were talked to have positive effect on emotions in all three sets. Within the visual qualities, *color, form, technological look, transparency* and *design* of the product were mentioned to have positive effect on the participants.

When it comes to the **brand**, it is seen that brand is a positive influential for both O and M sets. Participants did not talk about the **emotional** qualities of the product as much as the brand or the visual qualities. Number of the participants in M set draw attention as 9 of the participants talked about these qualities in general, while 7 of them talked about the qualities like being *cute, fun and feminine*.

Functional-usability qualities were also mentioned much by the participants. For these qualities, number of participants talked about these qualities positively and negatively changes for each set. The participants talked about the *functions of controls, handling, easy to use* and *functionality* of the iron-5 in general.

Discussion on Iron-5

It was observed that iron-5 elicited positive emotions more than negative emotions. However, there was not an evident difference between sets in all three sets like the iron-3 or iron-4. For this product, positive emotions were elicited more in O set and less in N set. In relation, the contempt emotion was elicited more by M and boredom was

elicited more by N sets. When the brands of the product in O and M are explored, it is seen that O is better (between 4 and 5 in brand awareness results) than M (between 3 and 4 in brand awareness results). It was expected that level of emotions of M set differ from O set because of the brand differences. However, it was observed that the emotions towards this product are similar. At, this point, the effect of brand can be observed when the positive emotions are investigated. However, other product qualities, as much as the brand of the product, affect the emotions of participants.

So far, the emotions towards products were analyzed and discussed over individual products. To understand how brands affect the emotions, analysis of emotions within groups will be shown and discussed.

4.3.4 Analysis of Emotions within Groups

This part includes all emotions towards irons in each set; (O, M and N). Each group consist of reports of 35 participants that saw the same product set (O, M or N) The figures will show all the emotions elicited by each iron of the set separately, which will help to visualize how product emotions change in each set. The Figures 4.11, 4.12 and 4.13 show the emotions towards irons with original brands O, mixed brands M and with no brand N respectively. This part will investigate all the emotions at top and lowest points, and then will compare the results.

4.3.4.1 Analysis of O (Irons with Original Brand Names) Set

This part included the analysis of products with original brand name on. The results of this set are presented in Figure 4.11.

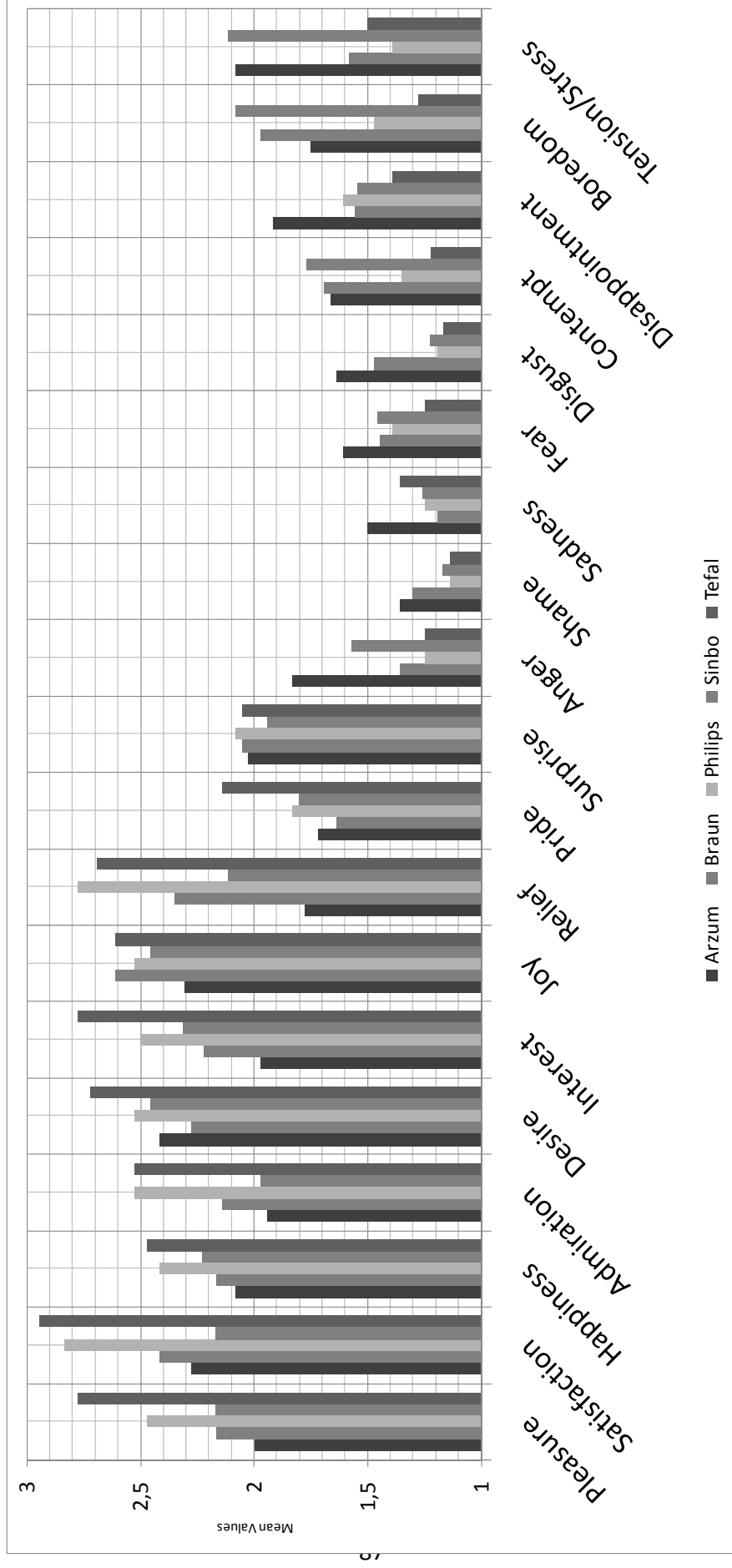


Figure 4.11 Analyses of Emotions within Original Set

It can be seen that within this set, mean values of emotions like *pleasure, satisfaction, happiness, admiration, desire, interest and pride*, are highest towards the iron of **Tefal** brand. Similarly, mean value of most of the negative emotions like *anger, shame, fear, disgust, contempt, disappointment and boredom* is lowest towards this iron. Within this group, mean value of the only *relief* emotion towards iron of **Philips** brand is highest.

The mean value of emotions *pleasure, satisfaction, admiration, interest, joy and relief* is lowest towards iron of **Arzum** within this iron set and alike, mean value of negative emotions like *anger, shame, sadness, fear, disgust, disappointment* is highest towards this iron.

When it comes to *joy* emotions, it is seen that irons of **Tefal and Braun** have similar values and highest and values of **Philips and Sinbo** are close to them. The negative emotions *contempt, boredom and tension/stress* are elicited by iron of **Sinbo** brand more than any other iron within this group. The values of *surprise* emotion towards the irons are at close range; **Tefal and Philips** are approximately the same; **Braun, Arzum and Sinbo** follow them with respect.

4.3.4.2 Analysis of M (Irons with Mixed Brands Names) Set

When it comes to the irons with purposefully altered brand names on, it could be beneficial to first remind the iron-brand matching one more time here. The figure below shows the emotions towards iron with M brand. For the 'M' brand information, it will be referred to the explanation below.

Iron of Arzum has Sinbo Brand
Iron of Braun has Philips Brand
Iron of Philips has Tefal Brand
Iron of Sinbo has Braun Brand
Iron of Tefal has Arzum Brand

It should be stated that in the Figure 4.12, brand names shown under the columns shows the original brand names of the iron.

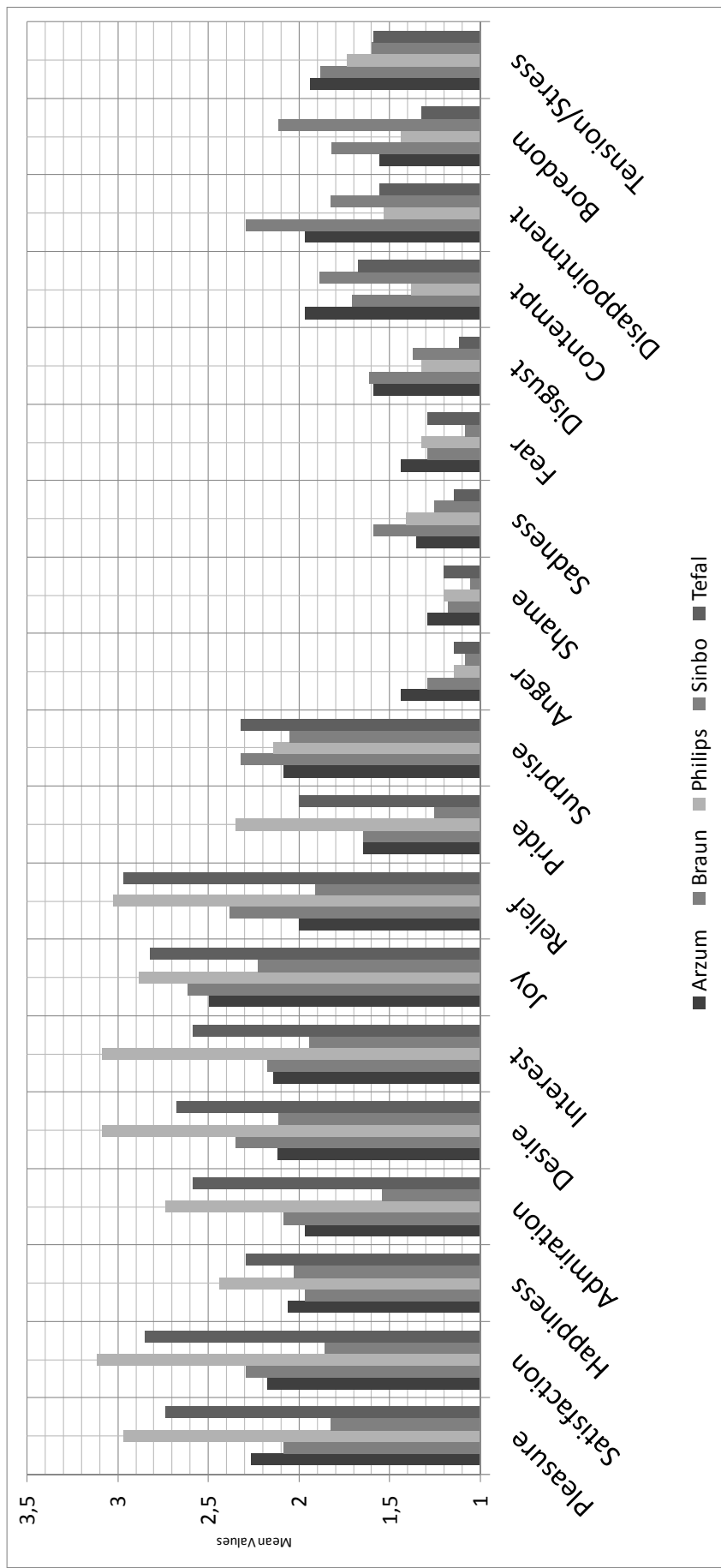


Figure 4.12 Analyses of Emotions within Mixed Set

In Figure 4.12, it is seen that iron of **Philips (with Tefal brand)** has highest scores in all of the positive emotions; *pleasure, satisfaction, happiness, admiration, desire, interest, joy, relief and pride*. Iron of **Tefal (with Arzum brand)** has the second highest positive emotions scores in all kind of emotions as listed above, and the scores are close to the scores of iron of **Philips (with Tefal brand)**. The lowest positive emotions scores in emotions like *pleasure, satisfaction, admiration, desire, interest, joy, relief and pride* are given to the iron of **Sinbo (with Braun brand)**. The lowest score on happiness emotion is given to the iron of **Braun (with Philips brand)**.

When it comes to the negative emotions in this set, it is seen that negative emotions towards each iron change. For instance, mean value of negative emotions like *anger, shame, fear, contempt, and tension/stress* are high for iron of **Arzum (with Sinbo brand)**. The iron of **Braun (with Philips brand)** is declared to elicit negative emotions *sadness, disgust and disappointment* more than any other iron of this set. Mean value of the iron of **Sinbo (with Braun brand)** shows that, it is found the most *boredom* eliciting iron within this set.

Like the positive emotions, the mean values of lowest negative emotions point different irons, the iron of **Sinbo (with Braun brand)** has the lowest score of *anger, shame and fear*; iron of **Tefal (with Philips brand)** has the lowest score of *sadness, disgust and boredom*; and iron of **Philips (with Braun brand)** has the lowest score of *contempt*. The mean value of the emotion *tension/stress* is approximately the same for two irons, **Sinbo and Tefal**, and it is lower than mean value of other irons of this set.

The mean values of *surprise* emotion towards irons of **Braun (with Philips brand) and Tefal (with Arzum brand)** are close to each other and are high with respect to other irons. Similarly, the values of this emotion towards irons of **Arzum (with Sinbo brand) and Sinbo (with Braun brand)** are close and are lower than other irons of this set. Figure 4.12, shows emotions towards iron when there is no brand name is on.

4.3.4.3 Analysis of N (Irons with No Brand Name) Set

The results of emotions within N set are presented in Figure 4.11.

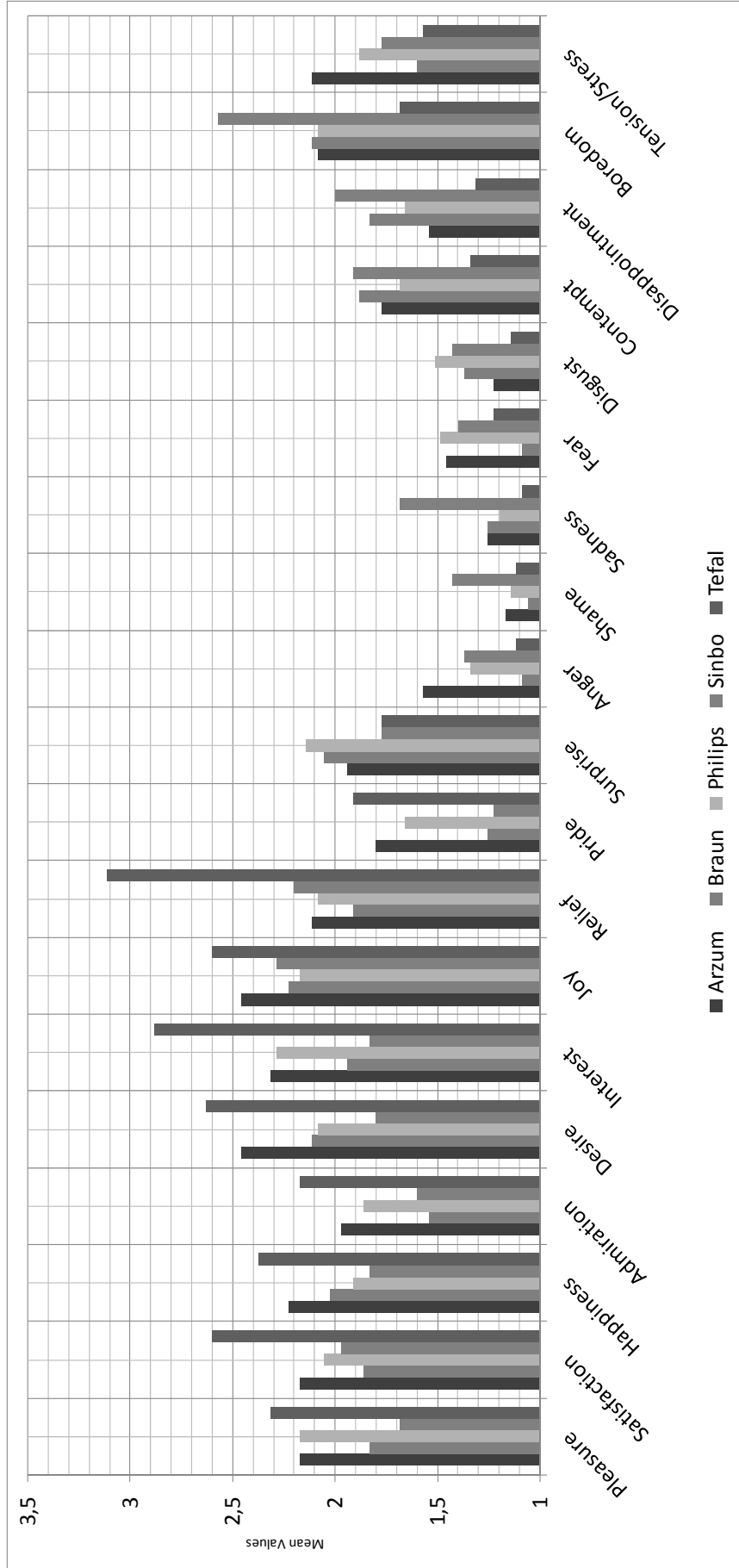


Figure 4.13 Analysis of Emotions within None Set

When the Figure 4.13 is analyzed, it can be seen that Tefal branded iron has the highest mean value in all positive emotions. The lowest mean values of positive emotions which are *pleasure, happiness, desire, interest and pride* are given to the iron of **Sinbo** brand; *satisfaction, admiration and relief* are given to the iron of **Braun**. Unlike in mixed brand set, *joy* is elicited by **Philips** branded iron, less than any other irons.

The negative emotions *sadness, contempt, disappointment and boredom* are elicited by **Sinbo** branded iron at most; *anger and tension/stress* by **Arzum** branded iron and *fear and disgust* by **Philips** branded iron. The **Braun** branded iron is the one which elicited *anger, shame, fear and tension/stress* at lowest level. The other negative emotions *sadness, disgust, contempt, disappointment, boredom and tension/stress* are elicited by **Tefal** branded iron at lowest level.

After analyzing the figures, to visualize which irons elicited the studied emotions at the highest and lowest levels, Table 4.8 is created. In the table, the matching irons and brands are highlighted for the better comparison of the results. In the M-columns, first the original brand names for irons are listed. Then under each brand names what the participants saw are written represented as 'L' (i.e. labeled as). The most challenging parts of the table will be discussed in the following parts. In the table, the brand names in emotion columns of M-set listed after label and N- set will not be highlighted, as the irons are not same.

Table 4.8 The Levels of Emotions in relation to Iron Sets

<i>EMOTION</i>	<i>O HIGH</i>	<i>M HIGH</i>	<i>N HIGH</i>	<i>O LOW</i>	<i>M LOW</i>	<i>N LOW</i>
<i>Pleasure</i>	Tefal	Philips L: Tefal	Tefal	Arzum	Sinbo L: Braun	Sinbo
<i>Satisfaction</i>	Tefal	Philips L: Tefal	Tefal	Arzum	Sinbo L: Braun	Braun
<i>Happiness</i>	Tefal	Philips L: Tefal	Tefal	Sinbo	Braun L: Philips	Sinbo
<i>Admiration</i>	Tefal	Philips L: Tefal	Tefal	Arzum	Sinbo L: Braun	Braun
<i>Desire</i>	Tefal	Philips L: Tefal	Tefal	Braun	Sinbo L: Braun	Sinbo
<i>Interest</i>	Tefal	Philips L: Tefal	Tefal	Arzum	Sinbo L: Braun	Sinbo
<i>Joy</i>	Tefal/Braun	Philips L: Tefal	Tefal	Arzum	Sinbo L: Braun	Philips
<i>Relief</i>	Philips	Philips L: Tefal	Tefal	Arzum	Sinbo L: Braun	Braun
<i>Pride</i>	Tefal	Philips L: Tefal	Tefal	Braun	Sinbo L: Braun	Sinbo
<i>Surprise</i>	Tefal/Philips	Philips L: Tefal	Philips	Sinbo	Sinbo L: Braun	Sinbo/Tefal
<i>Anger</i>	Arzum	Arzum L: Sinbo	Arzum	Tefal	Sinbo L: Braun	Braun
<i>Shame</i>	Arzum	Arzum L: Sinbo	Sinbo	Tefal	Sinbo L: Braun	Braun
<i>Sadness</i>	Arzum	Braun L: Philips	Sinbo	Braun	Tefal L: Arzum	Sinbo
<i>Fear</i>	Arzum	Arzum L: Sinbo	Philips	Tefal	Sinbo L: Braun	Braun
<i>Disgust</i>	Arzum	Braun L: Philips	Philips	Tefal	Tefal L: Arzum	Tefal
<i>Contempt</i>	Sinbo	Arzum L: Sinbo	Sinbo	Tefal	Philips L: Tefal	Tefal
<i>Disappointment</i>	Arzum	Braun L: Philips	Sinbo	Tefal	Philips L: Tefal	Tefal
<i>Boredom</i>	Sinbo	Sinbo L: Braun	Sinbo	Tefal	Tefal L: Arzum	Tefal
<i>Tension/Stress</i>	Sinbo	Arzum L: Sinbo	Arzum	Philips	Tefal L: Arzum	Tefal

When Table 4.8 is explored, *Tefal* brand name attracts the attention in most of the columns. It can be seen that the iron of Tefal brand elicited mostly positive emotions, except from *relief*, at highest level in O and N sets. However, the iron of Philips elicited these positive emotions when the Tefal label is on the iron. Similarly, the negative emotions *disgust* and *boredom* are elicited by Tefal iron at the lowest level in all three sets. This brand also elicits *surprise* emotion with original iron and Philips iron.

Contempt and disappointment are elicited at minimum level in O and N sets and the Philips iron with Tefal label M. *Tension/stress* is also elicited at lowest level by Tefal iron in M and N sets. Here it can be observed that both Tefal iron and Tefal brand has positive effect on participants.

Other brand name standing out is Sinbo. Iron of Sinbo is highlighted in the columns of *shame and boredom* in all three sets; *contempt* in O and N sets and in M set with Arzum brand, at highest level columns. It is also highlighted in *pleasure, happiness, desire, interest, pride and surprise* emotions in lowest level. When these columns are explored, it is seen that the brand name is listed in all three sets with original iron mostly which can mean that the iron had negative effect on participants as well as the brand.

The Arzum brand name is in the columns of *anger* in all three sets; *shame and fear* in O and M sets; *tension/stress* in M and N sets at highest level. These analysis shows that the iron of Arzum has negative effect on participants on the level of similar emotions.

The last two brands, Philips and Braun are highlighted less than the other three brands. The iron of Philips is seen in the highest level of *surprise and relief* emotions; *surprise* emotion in all three sets and *relief* emotion in O and M sets. This analysis shows that these two emotions are elicited by the properties of the iron, not the brand itself. Braun brand name is seen in only pride emotion with Sinbo iron but it cannot be said that the Braun brand name results in negative emotions as the original iron is more dominant in this table.

Discussion on Product Sets

Results and analysis of the study reveal that emotions of participants are affected by the visual qualities and brand of the product mostly. Figure 4.11 showed that, most of the positive emotions and surprise emotion were elicited more by product of Tefal brand in O and N sets and by the product of Philips brand with Tefal label in M set. A similar manner is observed for most of the negative emotions; they were less elicited by these products. The reason behind this can be related to the brand awareness results as much as the visual qualities. Products of Tefal were listed at the top of the list

in brand awareness questionnaire, compared to products of other listed brands. As a result, participants seeing the Tefal brand on a product may have been affected by the brand name, thinking that the products of this brand are good and better. However, the only influential here can not be the brand name, as the in N set, participants did not see any brand name and it was revealed in 4.3.3 that visual qualities of this iron had also positive affect for this product. Visual qualities of the product like the form, color and design of the Tefal product may have affected the emotions of participants as well as the brand. It is surprising that, the original product of Philips brand with Tefal brand elicited positive emotions as much as original Tefal brand. The effect of brand on emotions is clear but, visual qualities of the product were listed as negative in Table 4.7 of this product. Seeing a brand overcomes the negative effect of visual qualities of the product and elicits positive emotions. At this point, it can be said that brand name sometimes becomes dominant emotion eliciting factor.

Four emotions in negative part also attracted attention: anger, shame, fear and tension/stress, which are all elicited by the product of Arzum. These emotions can be related to the visual qualities of the product rather than the brand, as the color of the product was red and the participants related the color of the product with hot and hotness. It cannot be related to brand only because the participants did not mention much about the brand.

Another prominent brand name was Sinbo in the table and it was seen in the columns of eliciting more negative emotions and less positive emotions. Also, the products of this brand were also found average by the participants in brand awareness results. This was an expected result when the effect of brand on emotions is considered. However, the product of Sinbo brand elicits positive emotions (like pleasure, happiness, desire, interest, pride) at low levels in general. Qualities of the product come into prominence here. According to the previous analyses, visual qualities of this product were declared to have negative effect on emotions. At this point, both brand name and visual qualities of the product affect the emotions of participants.

Overall, it can be said that products of Braun and Philips were elicited positive and negative emotions at average levels and these brands affected the emotions of participants at average level in relation to the results shown in previous part.

4.4 Discussion and Conclusions

According to the analysis, statistically significant differentiation in emotions is observed in different emotions for only three irons. In this study, differentiations in emotions, even at minimum levels, are important as the aim of the study is not to pull out the emotions that have statistically meaning rather to visualize the similarities and differences. However, at the beginning of the study, a threshold differentiation level was decided to be used to pull out valuable data to discuss, and the analyses were done according to this threshold level.

In the graph analyses, it was seen that both positive and negative emotions towards the irons were between 1-point (any) and 3-point (average) levels mostly. This can be related to the fact that the ironing action was considered to be a negative task and the emotions towards the products may have been affected by this action negatively. However, it was surprising that in general, level of positive emotions towards products were higher than the level of negative emotions.

As discussed in 4.3.4, the effect of brands on emotions can be both positive and negative. For example, the emotions of participants are mostly positive towards the products when they think that brands of these products are generally good (4-point) or very good (5-point). The visual qualities of these products, such as color, material, design, general appearance and form, can also affect the emotions positively (i.e. Tefal and Philips). Here it can be said that, for some products, both brand and the product qualities affect the emotions positively when visual qualities are found appealing and the brand is considered to be good. However, when the brand has positive effect but the product qualities have negative effect, these two sides equate each other (i.e. Braun) and result can high level of both positive and negative emotions. For Braun product, for example, the level of negative emotions, such as boredom and disappointment, were also as high as the positive ones, such as joy and pleasure. The reason behind this conflict can be explained with the effect of brand, as these emotions

are not elicited less when there is no brand name is on the product. On the other hand, when the participant thinks that the products of the brand have average quality, but the visual qualities of the product are appealing, the negative affect of brand is reduced (i.e. Arzum brand and product) and positive emotions arouse more than the negative ones. However, when both the product and the brand are perceived as negative by the participants (i.e. Sinbo brand and product), the emotions of participants towards the product comes out to be negative. Consequently, the products of brands that are perceived to be between poor and average levels, elicit positive emotions less than the products of other 'good' brands

In relation to these, emotional (i.e. being fun and cute) and function-usability (i.e. being functional and easy to use) related qualities of the products are also important which supports the general perception of the product (i.e. Tefal brand and product). Although the functional-usability related qualities of the products were not mentioned much by the participants, this was an expected result as the product was not physically experienced by the participants.

In conclusion, it was seen that brands affect the emotions of participants towards products as much as the visual qualities of the products. However, the density of this effect changes for each product; some of the participants were not affected by the brand at all, some are affected positively and some are negatively.

According to these findings, the effect of products and brands of the products on emotions can be listed as shown in Table 4.9.

Table 4.9- Degree of Influence of Emotions for Each Product

Product	Source of Emotion	Influence Degree
Iron-1	Brand (Arzum) Product	Negative Positive
Iron-2	Brand (Braun) Product	Positive Negative
Iron-3	Brand (Philips) Product	Positive Positive
Iron-4	Brand (Sinbo) Product	Negative Negative
Iron-5	Brand (Tefal) Product	Positive Positive

According to these findings, it is possible to categorize the brands studied categorized into four, in relation to the Figure 2.13 (See section 2.4 of the literature review).

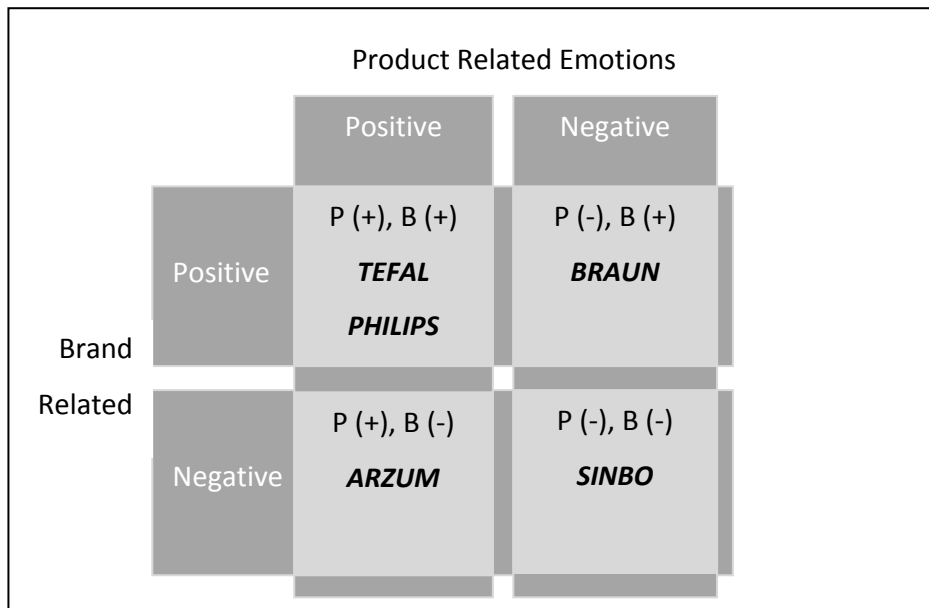


Figure 4.14 Relationship between brand and product emotions found in this study

Figure 4.14 illustrated the relationship between the brand and product emotions towards the irons in the study. Accordingly, (see also section 2.4), the users of Tefal and Philips can be named as ‘brand loyalists’ as both the product and the brand seem to

affect the emotions positively. The users of Braun can be named as 'brand routine buyers', as the products of these brands affected the emotions negatively. However, the brand affected the emotions positively. Users of Arzum can be named as 'information seekers' as the only positive influential of the emotions is the product itself. Finally, the 'brand switchers' of this study is Sinbo; both the brand and the product affected the emotions negatively.

To sum up, it can be said that, the empirical study conducted with irons revealed that emotions and product emotions have mutual affections. The users have an idea about how the products of a brand are or should be. When the product qualities overlap with the expected qualities, the results arouse as positive emotions towards brands and products. However, when the expected product qualities cannot be offered by the product, the results become both positive and negative emotions; positive towards brands and negative towards products. Meanwhile, users expect average-quality products from some of the brands, and when the products turn out to be better than they expected, the emotions can be both positive and negative again, but this time positive towards products and negative towards brands. Finally, participants' disappointment by both the brand and the product of this brand results in negative brand and product emotions.

CHAPTER 5

CONCLUSIONS

This chapter starts with state of the literature. Then answers to the research questions, in relation to the findings from the literature presented in Chapter 2, and from the empirical study presented in Chapter 4 are presented. The chapter also discusses the limitations of the study and concludes with the suggestions for further study.

5.1 State of the Literature

The present study investigated emotion related issues through the context of experience of users with the consumer products, including emotional responses of users towards products and brands. In Chapter 2, the theoretical background of the user emotions was explained. The psychology, design and marketing literatures were reviewed to understand the bases of user emotions.

From the psychology literature, definitions and theories of emotions were supplied with the bases of methods for measuring emotions. The psychology literature stated that emotion is a very complex term that has no single universally accepted definition. However, the researchers in the field defined emotions through theories in relation to how the emotions are evoked. Within these, cognitive-appraisal theories were explained in detail as these theories are mostly taken as the basis of product emotions in design research. According to cognitive-appraisal theories, the arousal and other actions that are part of any emotion are essential for determining how strong the emotional feeling will be. In these theories, one's attachment of meanings to events is also considered to elicit emotions (Desmet, 2002).

Following the psychology literature, the user emotions were explained from the design literature. Product experience, product emotions and emotion measurement methods were studied to understand the bases of user emotions towards products. Product

experience was summarized as the interaction of the user with the product in three levels: aesthetic experience, experience of meaning, and emotional experience and these levels were stated to have mutual relations (Desmet and Hekkert, 2007). Taking the cognitive-appraisal theories as a base, basic model of emotions were defined by Desmet, and according to the model, emotions are elicited towards a product are defined by the relationships of concerns and products which lead to product appraisals. Design literature stated that product emotions are personal, temporal and mixed, which means that the user can be affected differently by a product at different times, and these emotions can be positive and negative at the same time.

After the psychology literature, the user emotions were explained from the marketing literature. Marketing literature deals with the user emotions within the brand emotions context. According to the marketing literature, consumer behavior and brand experience are the bases of emotions of users towards brands, and the brand emotions were studied within these contexts. The marketing literature did not mention about how the users experience the product, rather it focused on how the brands are experienced. Product experience is defined as a part of the brand experience.

The literature review showed that the user emotions are not combined within both product and brand emotions. In both design and marketing literatures, the relationship between the brand and product emotions were not clearly defined. To understand the dimensions of the relationship between brand and product emotions, and how the consumers react towards brands and branded products, an empirical study was conducted. The procedures, results and analyses of this research were presented in Chapter 3 and Chapter 4 of the thesis, which explained the relationship of brand and product emotions. The empirical study was conducted with 105 participants with irons of five different brands. The products shown to the participants were formed in three sets: products with original brands, products with purposefully altered brands and products without brand names, and participants were asked to rate their emotions towards these products. The results of the empirical study filled the gap between design and marketing literatures in the sense that the results explained in which terms the brand and product emotions overlap, and how these overlaps result in.

5.2 Research Questions Revisited

During the study, the research questions proposed in Chapter 1 tried to be answered through the literature review and the empirical study. Answers to these questions are sought in different chapter of the thesis as illustrated in Figure 5.1.

CHAPTER 2 Literature Review	<ul style="list-style-type: none">• What are the theories and structures behind the elicitation of the emotions and how they are related to brands and products?• How are emotions of users discussed in design and in marketing literatures?
CHAPTER 4 Empirical Study	<ul style="list-style-type: none">• What is the relationship between the emotional responses of users towards products and brands of these products?• What is the relationship between brand awareness and user's emotions towards products of these brands?• How does the brand of the product affect the product emotions?• Which qualities of products are related to the brand and product emotions?

Figure 5. 1 Research Questions and Related Chapters

More direct answers to the research questions are as follows.

Q.1: What are the theories and structures behind the elicitation of the emotions and how they are related to brands and products?

To answer this question, the literature was reviewed, and the answer to this question tried to be found out through the literature review. In Chapter 2, the psychology literature explained that the theories of emotions differ in how they define the emotion and elicitation of the emotion. The Jamesian Theories, (James 1884, 1894; in Kalat and Shiota, 2007) for example, defines the process of emotion in the way that there is an

eliciting event which causes automatic nervous system (ANS) activity, that result in a subjective state. Evolutionary theories takes the studies of Darwin as base and states that emotions are genetically coded and they increase the changes of survival (Cosmides and Tooby, 2000, in Niedenthal et al., 2006). Social constructionist theories explain the emotions as the results of social changes in a society, and states that the emotional statements elicited by an event or object are related to the society that the person lives in. Cognitive-appraisal theories, as stated before, are taken as the base by most of the design researchers. These theories explain that emotions are elicited by the processes of evaluation that link events in the environment to the ongoing and link the emotions to the immediate cognitive processes of evaluation of meaning, causal attribution and assessment of coping possibilities (Niedenthal *et al.*, 2006; p.13).

In the second chapter, it was shown that both design and marketing researchers examine the emotions of users from their own perspectives. While doing this, they refer to the psychology literature to explain these emotions. The literature review indicated that design literature refers to the cognitive-appraisal model of psychology to explain the reasons behind the user emotions. The design literature focused on emotions of users to understand the qualities of products that elicit emotions and, by taking cognitive-appraisal theories as base, design literature indicate that the emotions of users are connected with products at cognitive level, as these theories connect the emotions to cognitive process of evaluation of the event, or the product. However, marketing literature does not refer to a specific model as market researchers are mostly interested in brand loyalty.

Q.2: How are emotions of users discussed in design and marketing literature?

In Chapter 2, design literature stated that product experience is the users' response to a product in the context of usage which is shaped by the characteristics of the user and the product as well as the context of the interaction. In product experience, the user interacts with the product at three levels; the user evaluates the aesthetics of the product, attaches meaning to the product and responses emotionally towards the product. Product emotions are considered to be a part of the product experience. In addition, the users experience a brand, in searching for a product in a retail environment, feeling satisfaction or dissatisfaction after using the product or talking

about the experience of the product. Brands play an important role in meaning attachment level of product experience, in purchase environment or in usage context. All these experiences are considered to be ways to communicate with the users. While market researchers are searching for the ways to create emotional connections with the users, designers are working on designing emotional user experiences. These two perspectives overlap in emotions of users.

Although several design and marketing researchers are interested in user emotions, there is no extensive study explaining the effect of brands on the emotions of users towards products; understanding the level of emotions towards branded-products and non-branded products, the qualities of products that affect these emotions. The results of the empirical study showed that there is a close relationship with positive emotions, high-quality brands and products of these brands, and with negative emotions, low-quality brands and products of these brands. The empirical study also showed that when the products of high-quality brands do not overlap with mental image of the brand, the emotions turn out to be negative. Moreover, in general the branded products elicit positive emotions more than negative emotions. According to these, it can be said that consumer emotions are affected by how the brand of the product is perceived by the consumers.

Q.3: What is the relationship between awareness of a brand and user's emotions towards products of these brands?

Answer to this question could not be found in literature as the reviewed literature gave information on the brand and product emotions separately; the first part of the empirical study was directed to answer this question. In Chapter 4, the brand awareness results of the study were shown separately and were matched with the emotions of the participants. According to these results, users think that products of some of the brands are better than the others. Even though they do not use a product of a brand, they can be positive or negative towards a specific brand. In other words, users have more experience with a number of the brands. However, even if they have never experience a specific brand, they can be more positive towards some of these brands. Accordingly, the user may not ever use a BMW car, but can be positive towards

a BMW. At this point, it can be said that brand of a product have close relationship with the emotions of users towards products of these brands.

In Chapter 4, the brand awareness results showed that when users have positive ideas towards a brand (i.e. Tefal and Philips), the product of the brand evokes more positive emotions than a non-branded product. In contrast, for the brands that are considered to have negative effect on consumers (i.e. Sinbo), the intensity of positive emotions decrease and intensity of negative emotions increase compared to the products of the brands that have positive effect. For some brands, users can be positive (i.e. Braun), but the product can disappoint the user, then the emotions result in negative towards the product. In relation to this, when users have negative ideas towards a brand (i.e. Arzum), but the product can be better than the user expected, then the emotions turn out to be positive towards the product. These relationships are based on how the users perceive the brand and how they think the product of that brand should be. As stated, the study showed that users may feel disappointed (i.e. Braun) when they come across a product of a brand that does not match the expected qualities, while they may feel pleasure when the product match the expected qualities (i.e. Tefal and Philips).

Q.4: How does the brand of the product affect the product emotions?

The answer to this question was first investigated with the literature. In the literature, design and marketing literatures were reviewed. Design literature was reviewed to understand how brand emotions are integrated into product emotions, and marketing literature was reviewed to figure out how product emotions are related to brand emotion. However, it was found that each literature is interested in user emotions within their own dimensions. As a result, answer to this question could not be answered through literature review, but through the results of the empirical study.

The results of the study, which included the answers of 105 participants and were presented in Chapter 4, included the answers to this question. First, the brand awareness part of the study was formed to understand what the users think about the listed brands. Following this, emotion evaluation part of the study was formed to understand how the users react emotionally towards the selected product. These two parts were conducted to understand the dimensions of the connection between the brands and emotions of users towards these brands. According to the results, most of

the users, who see a brand name on a product that is perceived to be good, state positive emotions. The results also showed that the participants who do not see any brand name on a product state less positive emotions than those who see any kind of brand name on the same product (i.e. Tefal and Philips products). Accordingly, when the product qualities, mostly visual qualities, are not considered to be outstanding, for example when the users do not like the form, color or material of the product, the results change according to the brand name they see on the product. When the users see a brand name on the product that is perceived to be good, then the product elicits positive emotions more than the negative emotions (i.e. Tefal and Philips products). However, when users see a brand name that is perceived to be bad, then the product elicits negative emotions more than the positive emotions. This result was observed for Sinbo product mostly; when the users saw Braun brand name on the product, they stated positive emotions more than those who saw Sinbo brand name on the same product. Moreover, for these products, not seeing a brand name on the product affects the emotions positively most of the time. Some brands are perceived as average by the participants (i.e. Arzum) and the emotions most of the participants change according to the visual qualities of the product. In this study, majority of the participants were affected by the form of Arzum product positively but color of the product negatively. It can be concluded that, seeing a brand name affect the way users perceive the product qualities, and emotions are results of how users perceive products in relation to brands.

Q.5: Which qualities of products are related to the brand and product emotions?

The literature review could not answer this question. As a result, Part 3 of the empirical study (interview) was conducted to understand the reasons behind the emotions. The results of the interviews were content analyzed, and presented in Chapter 4. These analyses supported the results of the empirical study to figure out the answer of this question. The content analyses of the empirical study presented in Chapter 4 revealed that qualities of a product that affect emotions of users can be categorized into four: visual qualities of products, brand name of the product, functional-usability related qualities and emotional-related qualities of the product. Within these qualities, majority of the participants talked about the visual qualities of the products most. When this category is deeply investigated, the visual qualities of the products, such as *form, color, general appearance and material* were mentioned mostly. Following this,

some of the participants stated that they are *aware of the brand* and the brand affects the emotions. Functional-usability related qualities, such as *being functional, easy to use, easy to handle* and emotional qualities of the products such as *being fun and cute* followed these qualities as influential of emotions respectively. These results show that visual qualities and brand of the product affect emotions more than the functional-usability and emotional related qualities of the product.

Q.6: What is the relationship between the emotional responses of users towards products and brands of these products?

The literature review revealed that product emotions and brand emotions were investigated within design and marketing literatures, and the empirical study exemplified the relationship of these two literatures. Accordingly, there is a close relationship between brands of a product and the product emotions. In some cases, when the visual qualities of the product are found appealing, the users do not ask for the brand of the product to feel positive towards that product. However, in general, positive pre-judgment about a brand affect product emotions positively, or visa versa. Also, as the underlying reasons of emotions, visual qualities of the product, the brand of the product, emotion-related and functional-usability related qualities were listed. Product qualities constitute a valuable data for both product designers to understand the expectations of users.

The results of the empirical study are valuable to show the relationship between the emotional responses of users towards products and brands of these products. As products are a way for a designer to communicate with users, while designing consumer products, brand image and visual, usability-functional and emotional qualities of the product can be combined to design for intended emotions. As this thesis reveals the connection of negative emotions with product qualities and brand image, the designer may refer to such qualities to avoid the unintended user emotions. In other words, the designer can bring emotion-related product qualities, by analyzing the brand image and needs and expectations of users from a specific brand.

5.3 Limitations of the Study

Presentation of Irons

The empirical study presented in the Chapter 3 and Chapter 4 was carried out with photorealistic pictures of the irons. The pictures depicted the irons from two different viewpoints. High quality pictures were used to present the properties of the irons as realistically as possible. If possible, it would be more preferable to make the evaluation through real-physical products owing to richer sensorial feedback. Showing the irons in two-dimension only limited the ability to pick up comments about ergonomics and usability. The study may have given more function and usability related keywords if the irons were shown in three-dimension. However, the study still reveals valuable results on the relationship between brand and product emotions.

Number of Products Involved in this Study

The empirical study was conducted with five irons. The set of the irons that consisted of purposefully altered brand names and they were presented to the participants with one type of brand name on. For example, iron-1 product of Arzum product was presented with Tefal brand name only. The study may have been conducted with the same iron, with three other brand names on, such as iron-1 with, Braun, Philips and Sinbo, to compare the results better. However, this would result in an increase in the number of iron sets and participants as well as the time spent for all participants. Within the time limits of the study, it was not possible to conduct the study this way. Nonetheless, one set of altered brand names gave a good indication about the questions of this research.

5.4 Further Research

During the literature review and empirical research, several possible areas of study were aroused for further studies. These can be considered as suggestions for the prospective areas of research.

The present study interested in the emotions of users and focused on the relationship between brand-name oriented and product related emotions. For further studies, whether the brand name of the product affect the experience of a product can be investigated. As further studies, the users may be given the products of specific brands,

experience the products in three dimension, and may be asked for rating the emotions. When the participants experience the product in three-dimension, they can give more experience related emotions. This kind of research can investigate the effect of using product of a specific brand on product experience.

In the present study, only one type of product, iron, was studied. The ironing action was considered to be a negative task and the emotions were stated to be elicited at very low levels. To visualize the difference between positive and negative emotions better, with the same study questions, further studies can be focused on different product types which are believed to have much more positive effect on users.

REFERENCES

Adamson, A.P. (2006). *Brand Simple*. England: Palgrave MacMillan.

Arnold, M. B. (1960). *Emotion & personality*. New York: Columbia University Press. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Bänziger, T., Tran, V. & Scherer, K.R. (2005). The emotion wheel; a tool for the verbal report of emotional reactions. Poster Presented at International Society for Research on Emotion.

Bearden, W.O. & Etzel, W.J. (1982). Reference group influence on product and brand purchase decisions. *Journal of Consumer Research*. 9, 183-194.

Berkman, H. W., Lindquist, J. D. & Sirgy M. J. (1996). *Consumer behavior*. Lincolnwood : NTC Business Books.

Boyle, E. (2006). Understanding brands as experiential spaces: axiological implications for marketing strategists. *Journal of Strategic Marketing*, 14, 175-189.

Brand Glossary (2007). Interbrand. (Ed) Jeff Swystun. Basingstoke [England]; New York : Interbrand/Palgrave Macmillan

Bruceberg, A. & McDonagh-Philip, D. (2001). New product development by eliciting user experience and aspirations. *International Journal of Human-Computer Studies*, 55, 435-452.

Cacioppo, J.T., Berbtson, G.G., Larsen, J.T., Poehlman K.M., Ito, T.A. (2001) The psychophysiology of emotion. In Desmet, P., (2002). *Designing Emotions*. Delft University of Technology, the Netherlands (PhD Thesis).

Caru, A. and Cova, B. (2006). How to facilitate immersion in a consumption experience: appropriation operations and service elements. *Journal of Consumer Behaviour*, 5(1), 4-14.

Cila, N. (2008). *The dimensions of users' fun experiences with consumer products*. Middle East Technical University, Turkey. (MS Thesis).

Cosmides, L. & Tooby, J. (2000). Evolutionary psychology and the emotions. In Niedenthal, P. M., Krauth-Gruber, S. & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Cunnell, D. and Prentice, R. (2000). Tourists' recollections of quality in museums: A service scape without people. *Museum Management and Curatorship* 18, 369–90. In Boyle, E. (2006). Understanding brands as experiential spaces: axiological implications for marketing strategists. *Journal of Strategic Marketing*, 14, 175-189.

Darwin, C., (1982/1998). *The expression of the emotions in man and animals*. New York/Oxford: Oxford University Press. In Niedenthal, P. M., Krauth-Gruber, S., & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Demir, E., Desmet, P. & Hekkert, P. (2006) Experiential Concepts in Design Research : A (Not Too) Critical Review. In M. A. Karlsson, P. M. A. Desmet, & J. Van Erp (Eds.), *Proceedings of the 5th Conference on Design and Emotion*. Göteborg, Sweden.

Demirbilek, O. and B. Şener. (2003) Product design, semantic and emotional response. *Ergonomics* 46 (13/14), 1346-1360.

Desmet, P.M.A. (2003). A multilayered model of product emotions. *The Design Journal*. In Press: 1-13.

Desmet, P.M.A. & Hekkert, P. (2007). Framework of product experience. *International Journal of Design* 1 (1), 2007.

Desmet, P.M.A., Overbeeke, C.J. & Tax, S.J.E.T. (2001). Designing products with added emotional value: development and application of an approach for research through design. *The Design Journal*, 4(1), 32-47.

Desmet, P. M. A. (2002). *Designing Emotions*. Technische Universiteit Delft. Retrieved March 19, 2008, from TUDelft Dissertation Abstracts. PhD Thesis.

DiSalvo C., Haninghton, B. & Forlizzi, J. (2002). An accessible framework of emotional experiences for a new product conception. In D. McDonagh, P. Hekkert, J.V. Erp & D. Gyi (Eds), *Design and Emotion, the experience of everyday things*. London: Taylor & Francis.

Dormann, C. (2003). Affective experiences in the home: measuring emotion. Paper Presented at the Home-Oriented Informatics and Telematics Conference 2003, Irvine, California.

Dubberly, H. A. (2000). Model of experience. *Gain: AIGA Journal of Design for the Network Economy 1*. In Rondeau, D.B. (2005). Branding is experience. *Communications of the ACM*. July 2005, 48 (7), 61-66.

Edwards, H. & Day, D. (2005). Creating passion brands: how to build emotional brand connection with consumers. Great Britain: MPG Book.

Ekman, P. (1999). *Handbook of Cognition & Emotion*. Sussex, UK: John Wiley & Sons.

Ekman, P., Friesen, W. V. & Ellsworth, P. (1982). What emotion categories or dimensions can observers judge from facial behavior? In Ortony, A., & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Engage Consortium Report (2005, July) Report of the State of the Art [online]

www.engage-design.org

Evans, M., Jamal, A. & Foxall, G. (2006). *Consumer Behavior*. Hoboken, NJ: John Willey & Sons.

Frijda, N. H. (1986). *The emotions*. New York: Cambridge University Press. In Ortony, A., & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Fridja, N.H. (1988). *The emotions*. The Cambridge Press: Cambridge. In Dormann, C. (2003). Affective experiences in the Home: measuring emotion. Paper Presented at the Home-Oriented Informatics and Telematics Conference, Irvine, California.

Forlizzi, J. & Battarbee, K. (2004) Understanding experience in interactive systems. *Proceedings of the 5th conference on Designing interactive systems: processes, practices, methods, & techniques*.

Gray, J. A. (1982). *The neuropsychology of anxiety*. Oxford: Oxford University Press. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Gobe, M. (2001). *Emotional Branding: the new paradigm for connecting brands to people*. Canada: Allworth Press.

Gobe, M. (2002). *Citizen Brand: 10 commandments for transforming brands in a consumer democracy*. Canada: Allworth Press.

Gobe, M. (2004) A brand of times.

www.emotionalbranding.com

Gobe, M. (2007). *Brandjam: humanizing brands through emotional design*. Canada: Allworth Press.

Helliker, K. & Leung, S. (2002). Counting beans: despite the jitters, most coffeehouses survive Starbucks. *The Wall Street Journal*, (September 24), A1, A11. In Thompson, C.J., Rindfleisch, A. & Arsel, Z. (2006). Emotional branding and the strategic value of the doppelganger brand image. *Journal of Marketing*, 70, 50-64.

Hekkert, P. (2006). Design aesthetics: principles of pleasure in product design. *Psychology Science*, 48 (2), 157-172.

Hoem, H.K. & Bjelland, H. (2006). Making users talk about product experiences: exploring the three levels of human processing in a product design context. In M. A. Karlsson, P. M. A. Desmet & J. Van Erp (Eds.), *Proceedings of the 5th Conference on Design and Emotion, 2006*. Göteborg, Sweden.

Holt, D. (1997) How consumers consumer: A taxonomy of consumption practices. *Journal of Consumer Research* 22, 1–16. In Boyle, E. (2006). Understanding brands as experiential spaces: axiological implications for marketing strategists. *Journal of Strategic Marketing*, 14, 175-189.

Hollingshead, A.B. (1996). The rank-order effect in group decision making. *Organizational Behavior & Human Decision Processes*, 68 (3), 181-193.

Ipsos-Ideas (2006). Emotion and Engagement, Brand Equity and Persuasion. [online] [cited in 15 March 2008].

<http://www.ipsos-ideas.com/article.cfm?id=3161>

Izard, C. E. (1971). *The face of emotion*. New York: Appleton-Century- Crofts. In Ortony, A., & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

James, W. (1880). *The principles of psychology*. New York: Holt. In Kalat, James W. & Shiota, Michelle N. *Emotion*. (2007). Canada: Thomson Wadsworth.

James, W. (1884). What is an emotion? *Mind*, 9, 188-205.

Kalat, James W. & Shiota, Michelle N. *Emotion*. (2007). Canada: Thomson Wadsworth.

Karjalainen T. (2007). It looks like a Toyota: educational approaches to designing for visual brand recognition. *International Journal of Design 1(1)*, 67-81.

Keller, K. L. (2000), "The brand report Card" *Harvard Business Review*, 78, 147-154

Keltner, D., & Gross, J.J. (1999). Functionalist accounts of emotion. *Cognition & Emotion*, 13, 467-480.

Keller, K. L. & Lehmann, D.R. (2006). Brands and branding: research findings and future priorities. *Marketing Science*, 25(6) 740-759.

Keltner, D., & Gross, J.J. (1999). Functional accounts of emotion. *Cognition and Emotion*, 13 (5), 467-480.

Kotler, P. & Keller, K.L. (2006). *A framework for Marketing Management*. USA: Pearson Education Ltd.

Lang, P. (1985). *The cognitive psychophysiology of emotion: anxiety and anxiety disorders*. Hillsdale NJ: Lawrence Erlbaum. In Dormann, C. (2003). Affective experiences in the home: measuring emotion. Presented at the Home-Oriented Informatics and Telematics Conference 2003, Irvine, California.

Larsen, R.J., & Diener, E. (1992). Promises and problems with the circumplex model of emotion. In Niedenthal, P. M., Krauth-Gruber, S. & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Laituri, D. (2006). Design in the context of business. In Cuffaro, D. (2006). *Process, Materials, and Measurements: All the Details Industrial Designers Need to Know But Can Never Find*.

Lindstrom, M. (2005). *Brand sense: how to build powerful brands through touch, taste, smell, sight and sound*. Great Britain: Creative Print and Design.

Lucero, A. & Martens, J. (2005). Mood Boards: Industrial Designers' Perception of Using Mixed Reality. *Proc. Special Interest Group for Computer-Human Interaction Conference 2005*, 13-16.

Ludden, G.D.S., Hekkert, P. & Schifferstein, H.N.J. (2006). Surprise and Emotion. In M. A. Karlsson, P. M. A. Desmet & J. Van Erp (Eds.), *Proceedings of the 5th Conference on Design and Emotion, 2006*. Göteborg, Sweden.

Mano, H. (1996) Assessing emotional reactions to TV Ads: a replication and extension with a brief adjective checklist. *Advances in consumer research*, 23, 63-69. In Dormann, C. (2003). Affective experiences in the Home: measuring emotion. Paper Presented at the *Home-Oriented Informatics and Telematics 2003*, Irvine, California.

McDougall, W. (1926). *An introduction to social psychology*. Boston: Luce. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

McDonagh, D., Anne B. and C. Haslam. (2002). Visual product evaluation: exploring users' emotional relationships with products. *Applied Ergonomics* 33, 231-240.

McEwen, W.J. (2005) Getting Emotional About Brands. *Gallup Management Journal*. [online]
(<http://gmi.gallup.com>)

Mehrabian, A. (1996). Pleasure-arousal-dominance: A general framework for describing and measuring individual differences in temperament. *Current Psychology: Developmental, Learning, Personality, Social*, 14, 261-292.

Mowrer, O. H. (1960). *Learning theory & behavior*. New York: Wiley. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Mozota, B.B. (2003). *Design Management*. Canada: Allworth Press.

Niedenthal, P. M., Krauth-Gruber, S. & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Nilsen, K.L. & Bjelland, H. (2006). Unpleasant emotions: Designing for stress, the need for guidelines when developing products or systems for use in stressful situations. In M. A. Karlsson, P. M. A. Desmet & J. Van Erp (Eds.), *Proceedings of the 5th Conference on Design and Emotion, 2006*. Göteborg, Sweden.

Norman, A. D. (2004). *Emotional Design: why we love (or hate) everyday things*. New York: Basic Books.

Norman, D. A. & Ortony, A. (2003). Designers and users: Two perspectives on emotion and design. *Symposium on foundations of interaction design*. Interaction Design Institute: Ivrea, Italy.

Oatley, K. & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. *Cognition & Emotion*, 1, 29-50. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Ortony, A., Clore, Gerald L. & Collins, A. (1988). *The cognitive structure of emotions*. Canada: Cambridge University Press.

Panksepp, J. (1982). Toward a general psychobiological theory of emotions. *The Behavioral & Brain Sciences*, 5, 407-467. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Pine, B. & Gilmore, J. (1999) *The Experience Economy: Work is Theatre & Every Business a Stage*, Boston: Harvard Business School Press. In Boyle, E. (2006). Understanding brands as experiential spaces: axiological implications for marketing strategists. *Journal of Strategic Marketing*, 14, 175-189.

Plutchik, R. (1980). A general psychocvolutionary theory of emotion. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Prentice, R. (1996). *Tourism as Experience; Tourist as Consumer: Insights and Enlightenment*, Edinburgh: Queen Margaret University College. In Boyle, E. (2006). Understanding brands as experiential spaces: axiological implications for marketing strategists. *Journal of Strategic Marketing*, 14, 175-189.

Richins, L. M. (1997). Measuring Emotions in the Consumption Experience. *Journal of Consumer Research*, 24, 127-146.

Roberts, K. (2004) *Lovemarks: The future beyond brands*. New York: Powerhouse Books. In Thompson, C.J., Rindfleisch, A. & Arsel, Z. (2006). Emotional branding and the strategic value of the doppelganger brand image. *Journal of Marketing*, 70, 50-64.

Rondeau, D.B. (2005). For mobile applications, branding is experience. *Communications of the ACM*. 48 (7), 61-66.

Russell, J.A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, 39, 1161-1178. Niedenthal, P. M., Krauth-Gruber, S. & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Russell, J.A. (2003). Core affect & the psychological construction of emotion. *Psychological Review*, 110, 145-172.

Schachter, S. & Singer, J. E. (1962). Cognitive, social and physiological determinants of emotional state. *Psychology review*, 69, 379-399. In Niedenthal, P. M., Krauth-Gruber, S. & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Scherer, K.R. (2005). What are emotions? & how can they be measured? *Social Science Information*, 44 (4), 695-729.

Schmitt, B. (1999). *Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, and Relate to Your Company and Brands*. New York: Free Press. In Keller, K. L. & Lehmann, D.R. (2006). Brands and branding: research findings and future priorities. *Marketing Science*, 25 (6), 740-759.

Schroeder, J.E., Salzer-Mörling, M. & Askegaard, S. (2006) *Brand Culture*. London ; New York : Routledge, 2006.

Tavşancıl, E. (2002). *Tutumların ölçülmesi ve SPSS ile veri analizi*. Ankara: Nobel Yayın.

Thompson, C.J., Rindfleisch, A. & Arsel, Z. (2006). Emotional branding and the strategic value of the doppelganger brand image. *Journal of Marketing*, 70, 50-64.

Tomkins, S. S. (1984). Affect theory. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315-331.

Veryzer, R.W. (1998). Key factors affecting consumer evaluation of discontinuous new products. *Journal of Product Innovation Management*, 15 (2), 136-150.

Watson, D. & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, *98*, 219-235. In Niedenthal, P. M., Krauth-Gruber, S. & Ric, F. (2006). *Psychology of Emotion: interpersonal, experiential & cognitive approaches*. UK: Psychology Press.

Watson, J. B. (1930). *Behaviorism*. Chicago: University of Chicago Press. In Ortony, A. & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, *97*, 315-331.

Weiner, B. & Graham, S. (1984). An attributional approach to emotional development. In Ortony, A., & Turner, T. J. (1990). What's basic about basic emotions? *Psychological Review*, *97*, 315-331.

Westbrook, R.A. & Oliver R.L. (1991). The Dimensionality of Consumption Emotion Patterns & Consumer Satisfaction. *Journal of Consumer Research*, *18*, 84-91.

White, C. & Yu, Y. (2005). Satisfaction emotions and consumer behavioral intentions. *Journal of Services Marketing*, *19* (19), 411-420.

Wikipedia Dictionary (2008). Experience. [online] [last accessed on 24 May 2008] <http://en.wikipedia.org/wiki/Experience>

Wikström, L. (1996) Methods for Evaluation of Products' Semantics, PhD Thesis, Chalmers University of Technology, Sweden. In Demirbilek, O. & B. Şener. (2003) Product design, semantic and emotional response. *Ergonomics*, *46* (13/14), 1346-1360.

Youngstrom, E.A. & Green, K.W. (2003). Reliability Generalization of Self-Report Emotions When Using Differential Emotions Scale. *Educational & Psychological Measurement*, *63* (2), 279-295.

APPENDIX A

Table A. 1 Properties of Participants

NO	Product Set	Gender	Profession	Age
1	Original 01	male	student	24
2	Original 01	female	banking staff	30
3	Original 01	female	banking staff	25
4	Original 01	female	house wife	58
5	Original 01	male	designer	24
6	Mixed 01	male	research assistant	33
7	Mixed 01	female	research assistant	23
8	Mixed 01	female	student	21
9	Mixed 01	male	student	20
10	Mixed 01	female	designer	22
11	None 01	male	student	21
12	None 01	female	government officer	27
13	None 01	male	designer	24
14	None 01	male	research assistant	24
15	None 01	female	academics	41
16	Original 02	male	statistician	26
17	Original 03	male	statistician	27
18	None 04	male	statistician	27
19	Original 04	female	psychologist	24
20	Mixed 02	male	statistician	27
21	Original 02	female	government officer	36
22	Mixed 02	male	research assistant	32
23	Mixed 03	female	engineer	27
24	Mixed 04	male	engineer	25
25	Mixed 05	female	government officer	41
26	Mixed 05	female	government officer	31
27	None 02	female	government officer	28
28	None 02	female	government officer	33
29	None 03	female	government officer	48
30	None 05	male	engineer	37
31	Original 05	male	research assistant	28
32	Original 03	male	research assistant	26
33	Original 02	male	research assistant	32
34	Original 03	female	research assistant	33
35	Mixed 02	female	research assistant	27
36	Mixed 03	female	research assistant	25
37	Original 03	male	research assistant	29
38	Original 05	female	research assistant	28

NO	Product Set	Gender	Profession	Age
39	Mixed 03	female	designer	29
40	Mixed 04	female	designer	27
41	None 02	male	student	21
42	None 03	male	student	20
43	None 03	male	student	22
44	Mixed 05	female	government officer	48
45	None 04	female	designer	25
46	None 05	female	research assistant	25
47	Original 03	female	research assistant	24
48	Original 03	male	research assistant	24
49	Original 05	male	research assistant	28
50	Original 04	female	research assistant	24
51	Mixed 05	male	designer	25
52	Mixed 04	male	research assistant	26
53	Mixed 03	female	research assistant	29
54	Mixed 03	female	designer	30
55	Mixed 02	male	student	22
56	None 02	female	biologist	26
57	None 03	female	designer	45
58	None 04	female	designer	39
59	None 04	female	teacher	36
60	None 05	female	psychologist	33
61	Original 02	female	teacher	47
62	Original 02	female	teacher	37
63	Original 03	female	teacher	45
64	Original 04	female	teacher	43
65	Original 05	male	psychologist	30
66	Mixed 02	female	government officer	48
67	Mixed 02	female	government officer	35
68	Mixed 04	female	government officer	40
69	Mixed 04	female	government officer	22
70	Mixed 05	male	designer	29
71	None 02	female	academics	53
72	None 03	male	teacher	41
73	None 04	female	student	22
74	None 05	male	student	21
75	None 05	female	designer	24
76	Mixed 05	female	academics	33
77	Mixed 05	female	designer	26
78	Mixed 03	female	academics	35
79	Mixed 03	female	academics	35
80	Mixed 02	female	academics	37
81	Mixed 04	male	designer	32

NO	Product Set	Gender	Profession	Age
82	Mixed 01	female	designer	22
83	Mixed 04	male	engineer	29
84	Mixed 01	female	designer	25
85	None 05	female	student	21
86	None 04	female	student	22
87	None 04	male	student	24
88	None 03	female	student	21
89	None 03	female	house wife	42
90	None 05	female	house wife	60
91	None 02	female	house wife	35
92	None 02	female	house wife	34
93	None 01	female	house wife	30
94	None 01	female	research assistant	26
95	Original 05	male	research assistant	25
96	Original 05	female	research assistant	28
97	Original 05	female	research assistant	24
98	Original 04	male	research assistant	28
99	Original 04	male	research assistant	26
100	Original 04	female	government officer	31
101	Original 04	female	government officer	44
102	Original 02	female	engineer	32
103	Original 02	female	engineer	30
104	Original 01	male	designer	36
105	Original 01	male	economist	29

APPENDIX B

Table B. 1 Order of Products in Product Sets

Product Set	Product Order
Original 1	Arzum / Braun / Philips /Sinbo / Tefal
Original 2	Braun / Philips / Sinbo / Tefal / Arzum
Original 3	Philips / Sinbo / Tefal / Arzum / Braun
Original 4	Sinbo / Tefal / Arzum / Braun/Philips
Original 5	Tefal / Arzum / Braun /Philips / Sinbo
Mixed 1	Arzum / Braun / Philips / Tefal / Sinbo
Mixed 2	Braun / Philips / Tefal / Sinbo /Arzum
Mixed 3	Philips / Tefal / Sinbo /Arzum / Braun
Mixed 4	Tefal / Sinbo /Arzum / Braun / Philips
Mixed 5	Sinbo /Arzum / Braun / Philips /Tefal
None 1	Tefal / Sinbo/ Philips / Braun / Arzum
None 2	Sinbo/ Philips / Braun / Arzum/ Tefal
None 3	Philips / Braun / Arzum/ Tefal/ Sinbo
None 4	Braun / Arzum / Tefal / Sinbo / Philips
None 5	Arzum/ Tefal/ Sinbo/ Philips / Braun

APPENDIX C

Questionnaire (Turkish Version)

katılımcı no :.....

Orta Doğu Teknik Üniversitesi
Endüstri Ürünleri Tasarımı Bölümü

Değerli Katılımcı,

Bu marka/ürün değerlendirme çalışması, Orta Doğu Teknik Üniversitesi, Endüstri Ürünleri Tasarımı Bölümü'nde yürüttüğüm, '*Kullanıcıların ürünlere olan duygusal yaklaşımında, markaların etkisi*' başlıklı yüksek lisans tez çalışması için kullanılacaktır.

Bu çalışmanın amacı, kullanıcıların ürünlerle ve markalarla olan duygusal etkileşimini araştırmaktır.

Cevaplandırmanızı isteyeceğim sorular, iki bölümden oluşmaktadır.

Bölüm 1'de sizden, markaları derecelendirmeniz istenecektir.

Bölüm 2'de ise size bazı ürün fotoğraflar gösterilecek ve bunları değerlendirmeniz istenecektir.

Bu bölümün sonunda, sizinle küçük bir söyleşi yapmak istiyorum.

Bu söyleşi sırasında, size ürünlerle ve verdiğiniz cevaplarla ilgili birkaç soru soracağım. Bu sırada, söylediklerinizi not etmeye çalışacağım, ancak daha detaylı yorum yapmak vekaçırılabilir noktaları hatırlamak amacıyla, izniniz olursa söyleyeceklerinizi bir ses kayıt cihazıyla kaydetmek istiyorum. Bu kayıt, sadece bu tez çalışması kapsamında kullanılacak ve üçüncü şahıslarla kesinlikle paylaşılmayacaktır.

Bu çalışmada, doğru ya da yanlış olmadığını, önemli olanın sizin ifadeleriniz olduğunu belirtmek isterim.

Yukarıda yazılanları kabul ediyorsanız, lütfen değerlendirmeye devam ediniz.

Katılımınız için teşekkür ederim.

Armağan Karahanoğlu
ODTÜ-Endüstri Ürünleri Tasarımı Bölümü
Araştırma Görevlisi

Başlarken...

Yaşınız:

Cinsiyetiniz:

Mesleğiniz:

Bölüm 1

Lütfen aşağıda listelenmiş markaların, ürünü/ürünleri hakkındaki düşüncelerinizi belirten seçeneği, işaretleyiniz. Bu markalardan, ürünü kullandığınız/ kullanmış olduğunuz varsa, lütfen en sağdaki kutucuğu işaretleyiniz.

	Çok kötü	Kötü	Orta	İyi	Çok iyi	Fikrim yok	Kullandım / Kullanıyorum
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>

Bölüm 2 (Örnek)



Resim 1'de görüldüğü Arzum markalı ürünün, aşağıda listelenen duyguları sizde hangi derecede uyandırdığını 1'den 5'e kadar derecelendirerek belirtiniz. Örneğin;

	Hiç	Az	Orta	Fazla	Çok fazla
• Kiskançlık	1	2	3	4	5

(Bu ürün bende orta derecede kiskançlık duygusu uyandırıyor.)

	Hiç	Az	Orta	Fazla	Çok fazla
• Arzu/İstek	1	2	3	4	5
• Eğlence/ Neşe	1	2	3	4	5
• Ferahlık	1	2	3	4	5
• Gerginlik	1	2	3	4	5
• Gurur	1	2	3	4	5
• Hayal Kırıklığı	1	2	3	4	5
• Hayranlık	1	2	3	4	5
• Hayret/Şaşkınlık	1	2	3	4	5
• Haz/Keyif	1	2	3	4	5
• Heves/ İlgi	1	2	3	4	5
• Hüzün/Üzüntü	1	2	3	4	5
• İğrenme/Tiksinti	1	2	3	4	5
• Kızgınlık	1	2	3	4	5
• Korku	1	2	3	4	5
• Küçümseme	1	2	3	4	5
• Memnuniyet	1	2	3	4	5
• Mutluluk / Sevinç	1	2	3	4	5
• Sıkılma	1	2	3	4	5
• Utanç	1	2	3	4	5

Questionnaire (English Version)

Middle East Technical University
Department of Industrial Design

Dear Participant,

This product/brand evaluation study will be used for the thesis that I have been going on in Middle East Technical University, Department of Industrial Design, under the name of '*The effects of brands on users' emotional responses towards products*'.

The aim of this study is to investigate the emotional responses of users towards brands and products of these brands.

The questionnaire consists of two parts.

In the first part, you are asked to evaluate the listed brands.

In the second part, you will be shown photographs of products and will be asked to evaluate these products.

At the end of the second part, you will be asked to talk about the product. In this part, I will try to write down some point but for further research, I would like to record our voice while talking, if you do not mind. This record will be kept confidential and will not be shared with third persons.

You should note that there is no true or false in this study, rather your ideas about the products.

If you admit the written, please turn the next page.

Thank you for your attendance

Armağan Karahanoğlu
METU- Department of Industrial Design
Research Assistant

Before Starting...

Your Age:

Your Gender:

Your Occupation:

Part 1

Please mark the box that represents your idea best. Please mark also the box on the right if you have ever experienced any product of the listed brand.

	Very Bad	Bad	Average	Good	Very Well	No Idea	Experience/d
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 2 (Example)



Please indicate how intensely you experience the listed emotions towards the product of Arzum Brand, shown in picture 1. For example;

	Any	Little	Avarage	Much	Very Much
• Jealousy	1	2	3	4	5

(This product makes me feel jealousy at average level.)

	Any	Little	Avarage	Much	Very Much
• Desire	1	2	3	4	5
• Joy	1	2	3	4	5
• Relief	1	2	3	4	5
• Distress	1	2	3	4	5
• Pride	1	2	3	4	5
• Disappointment	1	2	3	4	5
• Admiration	1	2	3	4	5
• Surprise	1	2	3	4	5
• Pleasure	1	2	3	4	5
• Interest	1	2	3	4	5
• Sadness	1	2	3	4	5
• Disgust	1	2	3	4	5
• Anger	1	2	3	4	5
• Fear	1	2	3	4	5
• Contempt	1	2	3	4	5
• Satisfaction	1	2	3	4	5
• Happiness	1	2	3	4	5
• Boredom	1	2	3	4	5
• Shame	1	2	3	4	5

APPENDIX D

Reliability Analyses

Reliability Analyses for Iron-1

Table D. 1 Reliability Statistics for Iron-1

Cronbach's Alpha	N of Items
,795	19

Table D. 2 Item-Total Statistics for Iron-1

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Desire (Arzu/İstek)	33,4190	77,650	,508	,776
Joy (Eğlence/Neşe)	33,3333	78,859	,452	,780
Relief (Ferahlık)	33,7905	84,590	,226	,794
Tension/Stress (Gerginlik)	33,7048	83,249	,245	,794
Pride (Gurur)	34,0286	78,720	,513	,776
Disappointment (Hayal Kırıklığı)	33,9429	85,554	,143	,801
Admiration (Hayranlık)	33,7905	78,013	,565	,773
Surprise (Hayret/Şaşkınlık)	33,7333	78,351	,515	,776
Pleasure (Haz/Keyif)	33,6095	77,721	,562	,773
Interest (Heves/İlgi)	33,6095	77,740	,518	,775
Sadness (Hüzün/Üzüntü)	34,3810	84,296	,351	,787
Disgust (İğrenme/Tiksinti)	34,2667	86,774	,110	,801
Anger (Kızgınlık)	34,1333	84,194	,285	,790
Fear (Korku)	34,2476	81,900	,429	,782
Contempt (Küçümseme)	33,9524	87,084	,085	,803
Satisfaction (Memnuniyet)	33,5429	78,962	,514	,776
Happiness (Mutluluk/Sevinç)	33,6286	77,909	,550	,773
Boredom (Sıkılma)	33,9524	85,988	,145	,799
Shame (Utanç)	34,4762	86,271	,270	,791

Reliability Analyses for Iron-2

Table D. 3 Reliability Statistics for Iron-2

Cronbach's Alpha	N of Items
,824	19

Table D. 4 Item-Total Statistics for Iron-2

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Desire (Arzu/İstek)	32,5143	82,675	,656	,800
Joy (Eğlence/Neşe)	32,2762	83,875	,602	,804
Relief (Ferahlık)	32,5429	82,693	,650	,801
Tension/Stress (Gerginlik)	33,0762	96,167	,102	,830
Pride (Gurur)	33,2476	88,227	,596	,808
Disappointment (Hayal Kırıklığı)	32,8762	97,244	,021	,837
Admiration (Hayranlık)	32,8381	84,233	,654	,802
Surprise (Hayret/Şaşkınlık)	32,6190	84,584	,567	,806
Pleasure (Haz/Keyif)	32,7333	83,505	,706	,799
Interest (Heves/İlgi)	32,6476	82,596	,663	,800
Sadness (Hüzün/Üzüntü)	33,4190	95,592	,199	,824
Disgust (İğrenme/Tiksinti)	33,2762	98,010	,014	,833
Anger (Kızgınlık)	33,5143	96,675	,169	,825
Fear (Korku)	33,4857	94,079	,293	,821
Contempt (Küçümseme)	33,0000	98,577	-,028	,837
Satisfaction (Memnuniyet)	32,5714	83,805	,630	,802
Happiness (Mutluluk/Sevinç)	32,7048	83,191	,636	,802
Boredom (Sıkılma)	32,7905	95,763	,076	,835
Shame (Utanç)	33,5810	95,053	,362	,820

Reliability Analyses for Iron-3

Table D. 5 Reliability Statistics for Iron-3

Cronbach's Alpha	N of Items
,826	19

Table D. 6 Item-Total Statistics for Iron-3

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Desire (Arzu/İstek)	33,5143	86,848	,579	,807
Joy (Eğlence/Neşe)	33,5524	85,633	,595	,806
Relief (Ferahlık)	33,4476	89,519	,422	,817
Tension/Stress (Gerginlik)	34,4095	97,475	,125	,831
Pride (Gurur)	34,1333	87,424	,576	,808
Disappointment (Hayal Kırıklığı)	34,4762	96,771	,160	,830
Admiration (Hayranlık)	33,7048	86,479	,616	,805
Surprise (Hayret/Şaşkınlık)	33,9524	86,757	,571	,808
Pleasure (Haz/Keyif)	33,5429	82,962	,710	,798
Interest (Heves/İlgi)	33,4571	83,558	,653	,802
Sadness (Hüzün/Üzüntü)	34,7905	96,802	,259	,824
Disgust (İğrenme/Tiksinti)	34,7333	99,428	,060	,832
Anger (Kızgınlık)	34,8286	98,105	,199	,826
Fear (Korku)	34,6762	98,298	,126	,829
Contempt (Küçümseme)	34,6000	98,934	,071	,832
Satisfaction (Memnuniyet)	33,4095	86,244	,577	,807
Happiness (Mutluluk/Sevinç)	33,8190	83,707	,701	,799
Boredom (Sıkılma)	34,4095	98,033	,102	,832
Shame (Utanç)	34,9143	98,579	,222	,825

Reliability Analyses for Iron-4

Table D. 7 Reliability Statistics for Iron-4

Cronbach's Alpha	N of Items
,813	19

Table D. 8 Item-Total Statistics for Iron-4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Desire (Arzu/İstek)	32,6190	86,161	,401	,804
Joy (Eğlence/Neşe)	32,4857	88,560	,271	,811
Relief (Ferahlık)	32,3329	86,593	,341	,807
Tension/Stress (Gerginlik)	32,6095	85,413	,410	,803
Pride (Gurur)	33,0286	88,528	,398	,805
Disappointment (Hayal Kırıklığı)	32,1429	84,624	,334	,808
Admiration (Hayranlık)	32,8667	86,674	,441	,803
Surprise (Hayret/Şaşkınlık)	32,4667	83,290	,451	,801
Pleasure (Haz/Keyif)	32,7524	85,227	,431	,802
Interest (Heves/İlgi)	32,7429	87,385	,330	,808
Sadness (Hüzün/Üzüntü)	32,5524	81,307	,532	,795
Disgust (İğrenme/Tiksinti)	32,7048	85,306	,341	,807
Anger (Kızgınlık)	32,9905	86,471	,426	,803
Fear (Korku)	33,0476	87,680	,384	,805
Contempt (Küçümseme)	32,3048	86,695	,236	,816
Satisfaction (Memnuniyet)	32,5429	85,847	,385	,805
Happiness (Mutluluk/Sevinç)	32,7619	84,875	,455	,801
Boredom (Sıkılma)	32,0667	81,774	,438	,802
Shame (Utanç)	32,8571	84,124	,455	,801

Reliability Analyses for Iron-5

Table D. 9 Reliability Statistics for Iron-5

Cronbach's Alpha	N of Items
,844	19

Table D. 10 Item-Total Statistics for Iron-5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Desire (Arzu/İstek)	33,3714	86,024	,732	,820
Joy (Eğlence/Neşe)	33,3714	86,390	,747	,820
Relief (Ferahlık)	33,1238	90,167	,524	,832
Tension/Stress (Gerginlik)	34,4952	102,156	,109	,849
Pride (Gurur)	34,0286	89,701	,593	,828
Disappointment (Hayal Kırıklığı)	34,6286	104,236	,004	,852
Admiration (Hayranlık)	33,6190	87,680	,668	,824
Surprise (Hayret/Şaşkınlık)	34,0000	94,442	,365	,841
Pleasure (Haz/Keyif)	33,4381	85,056	,751	,819
Interest (Heves/İlgi)	33,2952	87,729	,647	,825
Sadness (Hüzün/Üzüntü)	34,8476	102,900	,141	,846
Disgust (İğrenme/Tiksinti)	34,9048	102,337	,219	,844
Anger (Kızgınlık)	34,8762	102,013	,222	,844
Fear (Korku)	34,7905	100,898	,256	,843
Contempt (Küçümseme)	34,6381	105,406	-,068	,855
Satisfaction (Memnuniyet)	33,2476	86,707	,696	,822
Happiness (Mutluluk/Sevinç)	33,6667	85,647	,729	,820
Boredom (Sıkılma)	34,6190	103,392	,040	,852
Shame (Utanç)	34,8952	102,287	,221	,844

APPENDIX E

Statistical Analyses

Table E. 1 Descriptive Statistics of Brands

	N*	Mean*	N**	Mean**	N***	Mean***
Arçelik	101	3,9505	84	3,9167	17	4,1176
Arzum	82	3,3171	33	3,4242	49	3,2449
Braun	91	4,3626	53	4,3396	38	4,3947
Fakir	71	3,2394	18	3,7222	53	3,0755
King	55	2,4727	17	2,6471	38	2,3947
Philips	103	4,3301	71	4,3803	32	4,2188
Siemens	93	4,1183	54	4,1667	39	4,0513
Sinbo	68	2,5882	43	2,7674	25	2,2800
Tefal	102	4,4412	77	4,4286	25	4,4800
Vestel	97	3,6598	59	3,6441	38	3,6842

N* Number of people graded the brand

N** Number of people who used the product/s of the brand

N*** Number of people who *never* used the product/s of the brand

M* Mean value of grades of all people

M** Mean value of grades of people who used the product/s of the brand

M*** Mean value of grades of people who *never* used the product/s of the brand

Table E. 2 Analyses of Iron-1

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
Desire (Arzu/istek)	Original	Mixed	,29902	,29286	,565	-,3975	,9956
		Non	-,04048	,29070	,989	-,7319	,6509
	Mixed	Original	-,29902	,29286	,565	-,9956	,3975
		Non	-,33950	,29488	,485	-1,0408	,3619
	Non	Original	,04048	,29070	,989	-,6509	,7319
		Mixed	,33950	,29488	,485	-,3619	1,0408
Joy (Eğlence/Neşe)	Original	Mixed	-,19444	,29272	,785	-,8907	,5018
		Non	-,15159	,29056	,861	-,8427	,5395
	Mixed	Original	,19444	,29272	,785	-,5018	,8907
		Non	,04286	,29475	,988	-,6582	,7439
	Non	Original	,15159	,29056	,861	-,5395	,8427
		Mixed	-,04286	,29475	,988	-,7439	,6582
Relief (Ferahlık)	Original	Mixed	-,22222	,25256	,654	-,8229	,3785
		Non	-,33651	,25070	,375	-,9328	,2598
	Mixed	Original	,22222	,25256	,654	-,3785	,8229
		Non	-,11429	,25431	,895	-,7191	,4906
	Non	Original	,33651	,25070	,375	-,2598	,9328
		Mixed	,11429	,25431	,895	-,4906	,7191
Tension/Stress (Gerginlik)	Original	Mixed	,14216	,29017	,876	-,5480	,8323
		Non	-,03095	,28803	,994	-,7160	,6541
	Mixed	Original	-,14216	,29017	,876	-,8323	,5480
		Non	-,17311	,29218	,824	-,8680	,5218
	Non	Original	,03095	,28803	,994	-,6541	,7160
		Mixed	,17311	,29218	,824	-,5218	,8680
Pride (Gurur)	Original	Mixed	,07516	,26851	,958	-,5634	,7138
		Non	-,07778	,26653	,954	-,7117	,5561
	Mixed	Original	-,07516	,26851	,958	-,7138	,5634
		Non	-,15294	,27036	,839	-,7960	,4901
	Non	Original	,07778	,26653	,954	-,5561	,7117
		Mixed	,15294	,27036	,839	-,4901	,7960
Disappointment (Hayal Kırıklığı)	Original	Mixed	-,05392	,28257	,980	-,7260	,6181
		Non	,37381	,28048	,380	-,2933	1,0409
	Mixed	Original	,05392	,28257	,980	-,6181	,7260
		Non	,42773	,28452	,294	-,2490	1,1044
	Non	Original	-,37381	,28048	,380	-1,0409	,2933
		Mixed	-,42773	,28452	,294	-1,1044	,2490
Admiration (Hayranlık)	Original	Mixed	-,02614	,26340	,995	-,6528	,6006
		Non	-,02698	,26155	,994	-,6491	,5951
	Mixed	Original	,02614	,26340	,995	-,6006	,6528
		Non	-,00084	,26532	1,000	-,6319	,6302
	Non	Original	,02698	,26155	,994	-,5951	,6491

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
		Mixed	,00084	,26532	1,000	-,6302	,6319
Surprise (Hayret/Şaşkınlık)	Original	Mixed	-,06046	,27573	,974	-,7162	,5953
		Non	,08492	,27369	,948	-,5660	,7349
	Mixed	Original	,06046	,27573	,974	-,5953	,7162
		Non	,14538	,27763	,860	-,5149	,8057
	Non	Original	-,08492	,27369	,948	-,7349	,5660
		Mixed	-,14538	,27763	,860	-,8057	,5149
Pleasure (Haz/Keyif)	Original	Mixed	-,26471	,26955	,590	-,9058	,3764
		Non	-,17143	,26756	,798	-,8078	,4649
	Mixed	Original	,26471	,26955	,590	-,3764	,9058
		Non	,09328	,27142	,937	-,5523	,7388
	Non	Original	,17143	,26756	,798	-,4649	,8078
		Mixed	-,09328	,27142	,937	-,7388	,5523
Interest (Heves/İlgi)	Original	Mixed	-,17484	,28687	,815	-,8571	,5075
		Non	-,33206	,28476	,455	-1,0193	,3342
	Mixed	Original	,17484	,28687	,815	-,5075	,8571
		Non	-,16723	,28886	,832	-,8542	,5198
	Non	Original	,33206	,28476	,455	-,3342	1,0193
		Mixed	,16723	,28886	,832	-,5198	,8542
Sadness (Hüzün/Üzüntü)	Original	Mixed	,14706	,19156	,724	-,3086	,6027
		Non	,24286	,19015	,411	-,2094	,6951
	Mixed	Original	-,14706	,19156	,724	-,6027	,3086
		Non	,09580	,19289	,873	-,3630	,5546
	Non	Original	-,24286	,19015	,411	-,6951	,2094
		Mixed	-,09580	,19289	,873	-,5546	,3630
Disgust (İğrenme/Tiksinti)	Original	Mixed	,05065	,25361	,978	-,5525	,6538
		Non	,41032	,25174	,238	-,1884	1,0091
	Mixed	Original	-,05065	,25361	,978	-,6538	,5525
		Non	,34966	,25536	,330	-,2477	,9670
	Non	Original	-,41032	,25174	,238	-1,0091	,1884
		Mixed	-,34966	,25536	,330	-,9670	,2477
Anger (Kızgınlık)	Original	Mixed	,39216	,22706	,200	-,1479	,9322
		Non	,26190	,22539	,479	-,2742	,7980
	Mixed	Original	-,39216	,22706	,200	-,9322	,1479
		Non	-,13025	,22863	,837	-,6740	,4134
	Non	Original	-,26190	,22539	,479	-,7980	,2742
		Mixed	,13025	,22863	,837	-,4134	,6740
Fear (Korku)	Original	Mixed	,16993	,22665	,733	-,3691	,7090
		Non	,15397	,22498	,773	-,3811	,6891
	Mixed	Original	-,16993	,22665	,733	-,7090	,3691
		Non	-,01597	,22822	,997	-,5588	,5268
	Non	Original	-,15397	,22498	,773	-,6891	,3811
		Mixed	,01597	,22822	,997	-,5268	,5588
Contempt (Küçümseme)	Original	Mixed	-,30392	,26699	,493	-,9389	,3311

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
		Non	-,10476	,26503	,918	-,7341	,5256
	Mixed	Original	,30392	,26699	,493	-,3311	,9389
		Non	,19916	,26884	,740	-,4403	,8386
	Non	Original	,10476	,26503	,918	-,5256	,7341
		Mixed	-,19916	,26884	,740	-,8386	,4403
Satisfaction (Memnuniyet)	Original	Mixed	,10131	,26275	,921	-,5236	,7262
		Non	,10634	,26082	,913	-,5140	,7267
	Mixed	Original	-,10131	,26275	,921	-,7262	,5236
		Non	,00504	,26457	1,000	-,6242	,6333
	Non	Original	-,10634	,26082	,913	-,7267	,5140
		Mixed	-,00504	,26457	1,000	-,6333	,6242
Happiness (Mutluluk/Sevinç)	Original	Mixed	,02451	,27081	,995	-,6196	,6686
		Non	-,14524	,26882	,852	-,7846	,4941
	Mixed	Original	-,02451	,27081	,995	-,6686	,6196
		Non	-,16975	,27268	,808	-,8183	,4788
	Non	Original	,14524	,26882	,852	-,4941	,7846
		Mixed	,16975	,27268	,808	-,4788	,8183
Boredom (Sıkılma)	Original	Mixed	,19118	,25708	,738	-,4203	,8026
		Non	-,33471	,25518	,390	-,9426	,2712
	Mixed	Original	-,19118	,25708	,738	-,8026	,4203
		Non	-,52689	,25886	,109	-1,1426	,0888
	Non	Original	,33471	,25518	,390	-,2712	,9426
		Mixed	,52689	,25886	,109	-,0888	1,1426
Shame (Utanç)	Original	Mixed	,06699	,16118	,909	-,3164	,4504
		Non	,18968	,15999	,464	-,1908	,5702
	Mixed	Original	-,06699	,16118	,909	-,4504	,3164
		Non	,12269	,16230	,731	-,2633	,5087
	Non	Original	-,18968	,15999	,464	-,5702	,1908
		Mixed	-,12269	,16230	,731	-,5087	,2633

* The mean difference is significant at the .05 level.

Table E. 3 Analyses of Iron-2

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
			Lower Bound	Upper Bound		Lower Bound	Upper Bound	
Desire (Arzu/İstek)	Original	Mixed	-,07516	,30001	,966	-,7887	,6384	
		Non	,16339	,29780	,847	-,5448	,8718	
	Mixed	Original	,07516	,30001	,966	-,6384	,7887	
		Non	,23866	,30208	,710	-,4798	,9571	
	Non	Original	-,16339	,29780	,847	-,8718	,5448	
		Mixed	-,23866	,30208	,710	-,9571	,4798	
	Joy (Eğlence/Neşe)	Original	Mixed	-,00654	,29646	1,000	-,7116	,6986
			Non	,38254	,29428	,399	-,3174	1,0825
Mixed		Original	,00654	,29646	1,000	-,6986	,7116	
		Non	,38908	,29851	,397	-,3209	1,0991	
Non		Original	-,38254	,29428	,399	-1,0825	,3174	
		Mixed	-,38908	,29851	,397	-1,0991	,3209	
Relief (Ferahlık)		Original	Mixed	-,02124	,29865	,997	-,7316	,6891
			Non	,44683	,29645	,292	-,2582	1,1519
	Mixed	Original	,02124	,29865	,997	-,6891	,7316	
		Non	,46807	,30072	,269	-,2472	1,1833	
	Non	Original	-,44683	,29645	,292	-1,1519	,2582	
		Mixed	-,46807	,30072	,269	-1,1833	,2472	
	Tension/Stress (Gerginlik)	Original	Mixed	-,29902	,23422	,415	-,8585	,2604
			Non	-,01667	,23338	,997	-,5720	,5387
Mixed		Original	,29902	,23422	,415	-,2604	,8585	
		Non	,28234	,23685	,461	-,2810	,8457	
Non		Original	,01667	,23338	,997	-,5387	,5720	
		Mixed	-,28234	,23685	,461	-,8457	,2810	
Pride (Gurur)		Original	Mixed	-,00817	,21279	,999	-,5143	,4979
			Non	,38175	,21122	,172	-,1206	,8841
	Mixed	Original	,00817	,21279	,999	-,4979	,5143	
		Non	,38992	,21426	,168	-,1197	,8995	
	Non	Original	-,38175	,21122	,172	-,8841	,1206	
		Mixed	-,38992	,21426	,168	-,8995	,1197	
	Disappointment (Hayal Kırıklığı)	Original	Mixed	-,73856(*)	,27299	,022	-1,3879	-,0893
			Non	-,27302	,27098	,574	-,9175	,3715
Mixed		Original	,73856(*)	,27299	,022	,0893	1,3879	
		Non	,46555	,27488	,213	-,1882	1,1193	
Non		Original	,27302	,27098	,574	-,3715	,9175	
		Mixed	-,46555	,27488	,213	-1,1193	,1882	
Admiration (Hayranlık)		Original	Mixed	,05065	,26550	,980	-,5808	,6821
			Non	,59603	,26345	,066	-,0308	1,2229
	Mixed	Original	-,05065	,26550	,980	-,6821	,5808	
		Non	,54538	,26733	,108	-,0905	1,1812	
	Non	Original	-,59603	,26345	,066	-1,2229	,0308	
		Mixed	-,54538	,26733	,108	-1,1812	,0905	

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
Surprise (Hayret/Şaşkınlık)	Original	Mixed	-,26797	,29878	,643	-,9786	,4426
		Non	-,00159	,29658	1,000	-,7070	,7038
	Mixed	Original	,26797	,29878	,643	-,4426	,9786
		Non	,26639	,30085	,651	-,4491	,9819
	Non	Original	,00159	,29658	1,000	-,7038	,7070
		Mixed	-,26639	,30085	,651	-,9819	,4491
Pleasure (Haz/Keyif)	Original	Mixed	,07843	,26654	,953	-,5555	,7124
		Non	,33810	,26457	,411	-,2912	,9674
	Mixed	Original	-,07843	,26654	,953	-,7124	,5555
		Non	,25966	,26838	,599	-,3787	,8980
	Non	Original	-,33810	,26457	,411	-,9674	,2912
		Mixed	-,25966	,26838	,599	-,8980	,3787
Interest (Heves/İlgi)	Original	Mixed	,04575	,29862	,987	-,6645	,7560
		Non	,27937	,29642	,615	-,4256	,9844
	Mixed	Original	-,04575	,29862	,987	-,7560	,6645
		Non	,23361	,30069	,718	-,4815	,9488
	Non	Original	-,27937	,29642	,615	-,9844	,4256
		Mixed	-,23361	,30069	,718	-,9488	,4815
Sadness (Hüzün/Üzüntü)	Original	Mixed	-,39379	,17808	,074	-,8173	,0298
		Non	-,06270	,17677	,933	-,4831	,3477
	Mixed	Original	,39379	,17808	,074	-,0298	,8173
		Non	,33109	,17931	,160	-,0954	,7576
	Non	Original	,06270	,17677	,933	-,3477	,4831
		Mixed	-,33109	,17931	,160	-,7576	,0954
Disgust (İğrenme/Tiksinti)	Original	Mixed	-,14542	,22108	,788	-,6712	,3804
		Non	,10079	,21945	,890	-,4211	,6227
	Mixed	Original	,14542	,22108	,788	-,3804	,6712
		Non	,24622	,22261	,513	-,2832	,7757
	Non	Original	-,10079	,21945	,890	-,6227	,4211
		Mixed	-,24622	,22261	,513	-,7757	,2832
Anger (Kızgınlık)	Original	Mixed	,06699	,14617	,891	-,2807	,4146
		Non	,27540	,14509	,144	-,0697	,6205
	Mixed	Original	-,06699	,14617	,891	-,4146	,2807
		Non	,20840	,14718	,337	-,1417	,5585
	Non	Original	-,27540	,14509	,144	-,6205	,0697
		Mixed	-,20840	,14718	,337	-,5585	,1417
Fear (Korku)	Original	Mixed	,15033	,18447	,695	-,2884	,5891
		Non	,34873	,18311	,128	-,0768	,7942
	Mixed	Original	-,15033	,18447	,695	-,5891	,2884
		Non	,20840	,18574	,503	-,2333	,6502
	Non	Original	-,34873	,18311	,128	-,7942	,0768
		Mixed	-,20840	,18574	,503	-,6502	,2333
Contempt (Küçümseme)	Original	Mixed	-,01144	,25529	,999	-,6186	,5958
		Non	-,19127	,25331	,731	-,7940	,4114

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
	Mixed	Original	,01144	,25529	,999	-,5958	,6186
		Non	-,17983	,25706	,764	-,7912	,4316
	Non	Original	,19127	,25331	,731	-,4114	,7940
		Mixed	,17983	,25706	,764	-,4316	,7912
Satisfaction (Memnuniyet)	Original	Mixed	,12255	,28424	,903	-,5534	,7986
		Non	,55952	,28214	,122	-,1115	1,2306
	Mixed	Original	-,12255	,28424	,903	-,7986	,5534
		Non	,43697	,28620	,283	-,2437	1,1177
	Non	Original	-,55952	,28214	,122	-1,2306	,1115
		Mixed	-,43697	,28620	,283	-1,1177	,2437
Happiness (Mutluluk/Sevinç)	Original	Mixed	,19608	,29852	,789	-,5139	,9061
		Non	,13810	,29632	,887	-,5667	,8429
	Mixed	Original	-,19608	,29852	,789	-,9061	,5139
		Non	-,05798	,30059	,980	-,7729	,6569
	Non	Original	-,13810	,29632	,887	-,8429	,5667
		Mixed	,05798	,30059	,980	-,6569	,7729
Boredom (Sıkılma)	Original	Mixed	,14869	,29523	,870	-,5534	,8509
		Non	-,14206	,29305	,879	-,8391	,5549
	Mixed	Original	-,14869	,29523	,870	-,8509	,5534
		Non	-,29076	,29727	,592	-,9978	,4163
	Non	Original	,14206	,29305	,879	-,5549	,8391
		Mixed	,29076	,29727	,592	-,4163	,9978
Shame (Utanç)	Original	Mixed	,12908	,12633	,565	-,1714	,4296
		Non	,24841	,12540	,122	-,0498	,5467
	Mixed	Original	-,12908	,12633	,565	-,4296	,1714
		Non	,11933	,12721	,618	-,1832	,4219
	Non	Original	-,24841	,12540	,122	-,5467	,0498
		Mixed	-,11933	,12721	,618	-,4219	,1832

* The mean difference is significant at the .05 level.

Table E. 4 Analyses of Iron-3

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Desire (Arzu/İstek)	Original	Mixed	-,56046	,27045	,101	-1,2037	,0828
		Non	,44206	,26845	,231	-,1964	1,0806
	Mixed	Original	,56046	,27045	,101	-,0828	1,2037
		Non	1,00252(*)	,27232	,001	,3448	1,6502
	Non	Original	-,44206	,26845	,231	-1,0806	,1964
Joy (Eğlence/Neşe)	Original	Mixed	-,34458	,29714	,460	-1,0613	,3421
		Non	,34634	,29495	,451	-,3342	1,0579
	Mixed	Original	,34458	,29714	,460	-,3421	1,0613
		Non	,71092	,29919	,050	-,0007	1,4225
	Non	Original	-,34634	,29495	,451	-1,0579	,3342
Relief (Ferahlık)	Original	Mixed	-,25163	,28800	,658	-,9366	,4333
		Non	,69206(*)	,28588	,045	,0121	1,3720
	Mixed	Original	,25163	,28800	,658	-,4333	,9366
		Non	,94370(*)	,28999	,004	,2540	1,6333
	Non	Original	-,69206(*)	,28588	,045	-1,3720	-,0121
Tension/Stress (Gerginlik)	Original	Mixed	-,33641	,24689	,333	-,9336	,2408
		Non	-,49683	,24507	,111	-1,0797	,0861
	Mixed	Original	,33641	,24689	,333	-,2408	,9336
		Non	-,15042	,24860	,818	-,7417	,4408
	Non	Original	,49683	,24507	,111	-,0861	1,0797
Pride (Gurur)	Original	Mixed	-,51961	,26857	,133	-1,1584	,1192
		Non	,17619	,26659	,787	-,4579	,8103
	Mixed	Original	,51961	,26857	,133	-,1192	1,1584
		Non	,69580(*)	,27043	,031	,0526	1,3390
	Non	Original	-,17619	,26659	,787	-,8103	,4579
Disappointment (Hayal Kırıklığı)	Original	Mixed	,08170	,25161	,944	-,5167	,6801
		Non	-,04603	,24975	,981	-,6401	,5480
	Mixed	Original	-,08170	,25161	,944	-,6801	,5167
		Non	-,12773	,25334	,869	-,7303	,4748
	Non	Original	,04603	,24975	,981	-,5480	,6401
Admiration (Hayranlık)	Original	Mixed	-,20752	,26566	,715	-,8394	,4243
		Non	,67063(*)	,26370	,033	,0433	1,2978
	Mixed	Original	,20752	,26566	,715	-,4243	,8394
		Non	,87815(*)	,26750	,004	,2419	1,5144
	Non	Original	-,67063(*)	,26370	,033	-1,2978	-,0433
		Mixed	-,87815(*)	,26750	,004	-1,5144	-,2419

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
Surprise (Hayret/Şaşkınlık)	Original	Mixed	-,06373	,29318	,974	-,7610	,6336
		Non	-,05952	,29102	,977	-,7517	,6326
	Mixed	Original	,06373	,29318	,974	-,6336	,7610
		Non	,00420	,29520	1,000	-,6979	,7063
	Non	Original	,05952	,29102	,977	-,6326	,7517
		Mixed	-,00420	,29520	1,000	-,7063	,6979
Pleasure (Haz/Keyif)	Original	Mixed	-,49837	,29850	,222	-1,2083	,2116
		Non	,30079	,29630	,569	-,4039	1,0055
	Mixed	Original	,49837	,29850	,222	-,2116	1,2083
		Non	,79916(*)	,30056	,024	,0843	1,5140
	Non	Original	-,30079	,29630	,569	-1,0055	,4039
		Mixed	-,79916(*)	,30056	,024	-1,5140	-,0843
Interest (Heves/İlgi)	Original	Mixed	-,58824	,30953	,144	-1,3244	,1480
		Non	,21429	,30725	,766	-,5165	,9450
	Mixed	Original	,58824	,30953	,144	-,1480	1,3244
		Non	,80252(*)	,31167	,031	,0612	1,5438
	Non	Original	-,21429	,30725	,766	-,9450	,5165
		Mixed	-,80252(*)	,31167	,031	-1,5438	-,0612
Sadness (Hüzün/Üzüntü)	Original	Mixed	-,16176	,17812	,636	-,5854	,2619
		Non	,05000	,17681	,957	-,3705	,4705
	Mixed	Original	,16176	,17812	,636	-,2619	,5854
		Non	,21176	,17934	,467	-,2148	,6383
	Non	Original	-,05000	,17681	,957	-,4705	,3705
		Mixed	-,21176	,17934	,467	-,6383	,2148
Disgust (İğrenme/Tiksinti)	Original	Mixed	-,12908	,20067	,797	-,6064	,3382
		Non	-,31984	,19919	,248	-,7936	,1539
	Mixed	Original	,12908	,20067	,797	-,3382	,6064
		Non	-,19076	,20206	,614	-,6713	,2898
	Non	Original	,31984	,19919	,248	-,1539	,7936
		Mixed	,19076	,20206	,614	-,2898	,6713
Anger (Kızgınlık)	Original	Mixed	,10294	,15867	,793	-,2744	,4803
		Non	-,09286	,15750	,826	-,4674	,2817
	Mixed	Original	-,10294	,15867	,793	-,4803	,2744
		Non	-,19580	,15976	,441	-,5758	,1842
	Non	Original	,09286	,15750	,826	-,2817	,4674
		Mixed	,19580	,15976	,441	-,1842	,5758
Fear (Korku)	Original	Mixed	,06536	,20471	,945	-,4215	,5522
		Non	-,09683	,20320	,883	-,5801	,3865
	Mixed	Original	-,06536	,20471	,945	-,5522	,4215
		Non	-,16218	,20612	,712	-,6524	,3281
	Non	Original	,09683	,20320	,883	-,3865	,5801
		Mixed	,16218	,20612	,712	-,3281	,6524
Contempt (Küçümseme)	Original	Mixed	-,02124	,22448	,995	-,5552	,5127
		Non	-,32460	,22283	,316	-,8546	,2054

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Mixed	Original	,02124	,22448	,995	-,5127	,5552
		Non	-,30336	,22604	,375	-,8410	,2332
	Non	Original	,32460	,22283	,316	-,2054	,8546
		Mixed	,30336	,22604	,375	-,2332	,8410
Satisfaction (Memnuniyet)	Original	Mixed	-,28431	,28059	,570	-,9517	,3830
		Non	,77619(*)	,27852	,017	,1138	1,4386
	Mixed	Original	,28431	,28059	,570	-,3830	,9517
		Non	1,06050(*)	,28253	,001	,3885	1,7325
	Non	Original	-,77619(*)	,27852	,017	-1,4386	-,1138
		Mixed	-1,06050(*)	,28253	,001	-1,7325	-,3885
Happiness (Mutluluk/Sevinç)	Original	Mixed	-,02451	,29373	,996	-,7231	,6741
		Non	,50238	,29156	,202	-,1911	1,1958
	Mixed	Original	,02451	,29373	,996	-,6741	,7231
		Non	,52689	,29576	,181	-,1765	1,2303
	Non	Original	-,50238	,29156	,202	-1,1958	,1911
		Mixed	-,52689	,29576	,181	-1,2303	,1765
Boredom (Sıkılma)	Original	Mixed	,03105	,23690	,991	-,5324	,5945
		Non	-,61339(*)	,23416	,028	-1,1728	-,0542
	Mixed	Original	-,03105	,23690	,991	-,5945	,5324
		Non	-,64454(*)	,23854	,022	-1,2119	-,0772
	Non	Original	,61339(*)	,23416	,028	,0542	1,1728
		Mixed	,64454(*)	,23854	,022	,0772	1,2119
Shame (Utanç)	Original	Mixed	-,06699	,12563	,855	-,3658	,2318
		Non	-,00397	,12470	,999	-,3006	,2926
	Mixed	Original	,06699	,12563	,855	-,2318	,3658
		Non	,06303	,12650	,872	-,2378	,3639
	Non	Original	,00397	,12470	,999	-,2926	,3006
		Mixed	-,06303	,12650	,872	-,3639	,2378

* The mean difference is significant at the .05 level.

Table E. 5 Analyses of Iron-4

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Desire (Arzu/İstek)	Original	Mixed	-,61928(*)	,22815	,021	-1,1619	-,0766
		Non	-,27222	,22647	,455	-,8109	,2664
	Mixed	Original	,61928(*)	,22815	,021	,0766	1,1619
		Non	,33706	,22973	,290	-,1993	,8933
	Non	Original	,27222	,22647	,455	-,2664	,8109
		Mixed	-,33706	,22973	,290	-,8933	,1993
Joy (Eğlence/Neşe)	Original	Mixed	-,70261(*)	,21481	,004	-1,2134	-,1917
		Non	-,84127(*)	,21322	,000	-1,3384	-,3331
	Mixed	Original	,70261(*)	,21481	,004	,1917	1,2134
		Non	-,13866	,21629	,798	-,6531	,3758
	Non	Original	,84127(*)	,21322	,000	,3331	1,3384
		Mixed	,13866	,21629	,798	-,3758	,6531
Relief (Ferahlık)	Original	Mixed	-,77451(*)	,23677	,004	-1,3376	-,2114
		Non	-,53333	,23402	,065	-1,0923	,0256
	Mixed	Original	,77451(*)	,23677	,004	,2114	1,3376
		Non	,24118	,23840	,571	-,3258	,8082
	Non	Original	,53333	,23402	,065	-,0256	1,0923
		Mixed	-,24118	,23840	,571	-,8082	,3258
Tension/Stress (Gerginlik)	Original	Mixed	,06536	,25133	,963	-,5324	,6631
		Non	,11746	,24948	,885	-,4759	,7108
	Mixed	Original	-,06536	,25133	,963	-,6631	,5324
		Non	,05210	,25308	,977	-,5498	,6540
	Non	Original	-,11746	,24948	,885	-,7108	,4759
		Mixed	-,05210	,25308	,977	-,6540	,5498
Pride (Gurur)	Original	Mixed	-,57190(*)	,16051	,002	-,9537	-,1901
		Non	-,00634	,15933	,999	-,3853	,3726
	Mixed	Original	,57190(*)	,16051	,002	,1901	,9537
		Non	,56555(*)	,16162	,002	,1811	,9500
	Non	Original	,00634	,15933	,999	-,3726	,3853
		Mixed	-,56555(*)	,16162	,002	-,9500	-,1811
Disappointment (Hayal Kırıklığı)	Original	Mixed	,23203	,30538	,728	-,4943	,9583
		Non	,55556	,30313	,164	-,1654	1,2765
	Mixed	Original	-,23203	,30538	,728	-,9583	,4943
		Non	,32343	,30749	,546	-,4078	1,0549
	Non	Original	-,55556	,30313	,164	-1,2765	,1654
		Mixed	-,32343	,30749	,546	-1,0549	,4078
Admiration (Hayranlık)	Original	Mixed	-,33641	,20310	,208	-,8295	,1367
		Non	-,21111	,20161	,549	-,6906	,2684
	Mixed	Original	,33641	,20310	,208	-,1367	,8295
		Non	,13429	,20451	,786	-,3411	,6217
	Non	Original	,21111	,20161	,549	-,2684	,6906
		Mixed	-,13429	,20451	,786	-,6217	,3411

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
Surprise (Hayret/Şaşkınlık)	Original	Mixed	-,26144	,28179	,624	-,9316	,4088
		Non	,17302	,27971	,810	-,4922	,8383
	Mixed	Original	,26144	,28179	,624	-,4088	,9316
		Non	,43345	,28373	,281	-,2404	1,1093
Pleasure (Haz/Keyif)	Original	Mixed	-,43345	,28373	,281	-1,1093	,2404
		Non	-,17302	,27971	,810	-,8383	,4922
	Mixed	Original	,43954	,24292	,172	-1,0173	,1382
		Non	-,21339	,24113	,651	-,7870	,3600
Interest (Heves/İlgi)	Original	Mixed	-,66503(*)	,22660	,011	-1,2040	-,1261
		Non	-,52302	,22493	,057	-1,0580	,0120
	Mixed	Original	,66503(*)	,22660	,011	,1261	1,2040
		Non	,14202	,22817	,808	-,4007	,6847
Sadness (Hüzün/Üzüntü)	Original	Mixed	,37255	,28816	,402	-,3128	1,0579
		Non	,48095	,28604	,217	-,1994	1,1613
	Mixed	Original	-,37255	,28816	,402	-1,0579	,3128
		Non	,10840	,29016	,926	-,5817	,7985
Disgust (İğrenme/Tiksinti)	Original	Mixed	,40686	,27893	,315	-,2565	1,0703
		Non	,65476	,27687	,052	-,0038	1,3133
	Mixed	Original	-,40686	,27893	,315	-1,0703	,2565
		Non	,24790	,28086	,652	-,4201	,9159
Anger (Kızgınlık)	Original	Mixed	,20098	,21566	,621	-,3119	,7139
		Non	,21190	,21407	,585	-,2972	,7210
	Mixed	Original	-,20098	,21566	,621	-,7139	,3119
		Non	,01092	,21715	,999	-,5055	,5274
Fear (Korku)	Original	Mixed	,12092	,20194	,821	-,3494	,6012
		Non	,04444	,20045	,973	-,4323	,5212
	Mixed	Original	-,12092	,20194	,821	-,6012	,3494
		Non	-,07647	,20333	,925	-,5601	,4071
Contempt (Küçümseme)	Original	Mixed	,70098	,31504	,072	-,0483	1,4503
		Non	,66905	,31272	,087	-,0747	1,4128

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound		Lower Bound	Upper Bound
	Mixed	Original	-,70098	,31504	,072	-1,4503	,0483
		Non	-,03193	,31722	,994	-,7864	,7226
	Non	Original	-,66905	,31272	,087	-1,4128	,0747
		Mixed	,03193	,31722	,994	-,7226	,7864
Satisfaction (Memnuniyet)	Original	Mixed	-,62092(*)	,24471	,033	-1,2029	-,0389
		Non	-,41587	,24290	,206	-,9936	,1618
	Mixed	Original	,62092(*)	,24471	,033	,0389	1,2029
		Non	,20504	,24640	,684	-,3810	,7911
	Non	Original	,41587	,24290	,206	-,1618	,9936
		Mixed	-,20504	,24640	,684	-,7911	,3810
Happiness (Mutluluk/Sevinç)	Original	Mixed	-,20588	,24267	,674	-,7830	,3713
		Non	-,32857	,24088	,364	-,9015	,2443
	Mixed	Original	,20588	,24267	,674	-,3713	,7830
		Non	-,12269	,24434	,870	-,7038	,4585
	Non	Original	,32857	,24088	,364	-,2443	,9015
		Mixed	,12269	,24434	,870	-,4585	,7038
Boredom (Sıkılma)	Original	Mixed	,41330	,32417	,412	-,3476	1,1844
		Non	-,09921	,32178	,949	-,8645	,6661
	Mixed	Original	-,41330	,32417	,412	-1,1844	,3476
		Non	-,51261	,32641	,263	-1,2889	,2637
	Non	Original	,09921	,32178	,949	-,6661	,8645
		Mixed	,51261	,32641	,263	-,2637	1,2889
Shame (Utanç)	Original	Mixed	,41993	,25859	,240	-,1951	1,0340
		Non	,43254	,25668	,216	-,1779	1,0430
	Mixed	Original	-,41993	,25859	,240	-1,0340	,1951
		Non	,01261	,26037	,999	-,6067	,6319
	Non	Original	-,43254	,25668	,216	-1,0430	,1779
		Mixed	-,01261	,26037	,999	-,6319	,6067

* The mean difference is significant at the .05 level.

Table E. 6 Analyses of Iron-5

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Desire (Arzu/İstek)	Original	Mixed	,04575	,30767	,988	-,6860	,7775
		Non	,09365	,30540	,950	-,6327	,8200
	Mixed	Original	-,04575	,30767	,988	-,7775	,6860
		Non	,04790	,30980	,987	-,6889	,7847
	Non	Original	-,09365	,30540	,950	-,8200	,6327
		Mixed	-,04790	,30980	,987	-,7847	,6889
Joy (Eğlence/Neşe)	Original	Mixed	-,21242	,29565	,753	-,9156	,4908
		Non	,01111	,29337	,999	-,6869	,7091
	Mixed	Original	,21242	,29565	,753	-,4908	,9156
		Non	,22343	,29769	,733	-,4845	,9316
	Non	Original	-,01111	,29337	,999	-,7091	,6869
		Mixed	-,22343	,29769	,733	-,9316	,4845
Relief (Ferahlık)	Original	Mixed	-,27614	,31427	,655	-1,0236	,4713
		Non	-,41984	,31195	,373	-1,1618	,3221
	Mixed	Original	,27614	,31427	,655	-,4713	1,0236
		Non	-,14370	,31644	,893	-,8963	,6089
	Non	Original	,41984	,31195	,373	-,3221	1,1618
		Mixed	,14370	,31644	,893	-,6089	,8963
Tension/Stress (Gerginlik)	Original	Mixed	-,08824	,21677	,913	-,6038	,4273
		Non	-,07143	,21517	,941	-,5832	,4403
	Mixed	Original	,08824	,21677	,913	-,4273	,6038
		Non	,01681	,21827	,997	-,5023	,5349
	Non	Original	,07143	,21517	,941	-,4403	,5832
		Mixed	-,01681	,21827	,997	-,5349	,5023
Pride (Gurur)	Original	Mixed	,13889	,29484	,885	-,5624	,8401
		Non	,22460	,29267	,724	-,4715	,9207
	Mixed	Original	-,13889	,29484	,885	-,8401	,5624
		Non	,08571	,29688	,955	-,6204	,7918
	Non	Original	-,22460	,29267	,724	-,9207	,4715
		Mixed	-,08571	,29688	,955	-,7918	,6204
Disappointment (Hayal Kırıklığı)	Original	Mixed	-,16993	,19307	,654	-,6291	,2893
		Non	,07460	,19164	,920	-,3812	,5304
	Mixed	Original	,16993	,19307	,654	-,2893	,6291
		Non	,24454	,19440	,422	-,2178	,7069
	Non	Original	-,07460	,19164	,920	-,5304	,3812
		Mixed	-,24454	,19440	,422	-,7069	,2178
Admiration (Hayranlık)	Original	Mixed	-,06046	,29968	,978	-,7732	,6523
		Non	,34634	,29747	,457	-,3412	1,0639
	Mixed	Original	,06046	,29968	,978	-,6523	,7732
		Non	,41681	,30175	,344	-,3009	1,1334

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
	Non	Original	-,34634	,29747	,457	-1,0639	,3412
		Mixed	-,41681	,30175	,344	-1,1334	,3009
Surprise (Hayret/Şaşkınlık)	Original	Mixed	-,26797	,29905	,644	-,9792	,4433
		Non	,28413	,29684	,606	-,4219	,9901
	Mixed	Original	,26797	,29905	,644	-,4433	,9792
		Non	,55210	,30112	,164	-,1641	1,2683
	Non	Original	-,28413	,29684	,606	-,9901	,4219
		Mixed	-,55210	,30112	,164	-1,2683	,1641
Pleasure (Haz/Keyif)	Original	Mixed	,04248	,31269	,990	-,7012	,7862
		Non	,46339	,31038	,298	-,2747	1,2017
	Mixed	Original	-,04248	,31269	,990	-,7862	,7012
		Non	,42101	,31485	,378	-,3278	1,1698
	Non	Original	-,46339	,31038	,298	-1,2017	,2747
		Mixed	-,42101	,31485	,378	-1,1698	,3278
Interest (Heves/ilgi)	Original	Mixed	,18954	,30873	,813	-,5448	,9238
		Non	-,10794	,30646	,933	-,8368	,6209
	Mixed	Original	-,18954	,30873	,813	-,9238	,5448
		Non	-,29748	,31087	,606	-1,0369	,4419
	Non	Original	,10794	,30646	,933	-,6209	,8368
		Mixed	,29748	,31087	,606	-,4419	1,0369
Sadness (Hüzün/Üzüntü)	Original	Mixed	,21405	,14071	,285	-,1206	,5487
		Non	,27540	,13967	,124	-,0568	,6076
	Mixed	Original	-,21405	,14071	,285	-,5487	,1206
		Non	,06133	,14168	,902	-,2756	,3983
	Non	Original	-,27540	,13967	,124	-,6076	,0568
		Mixed	-,06133	,14168	,902	-,3983	,2756
Disgust (İğrenme)	Original	Mixed	,04902	,12711	,921	-,2533	,3413
		Non	,02381	,12617	,981	-,2763	,3239
	Mixed	Original	-,04902	,12711	,921	-,3413	,2533
		Non	-,02521	,12799	,979	-,3296	,2792
	Non	Original	-,02381	,12617	,981	-,3239	,2763
		Mixed	,02521	,12799	,979	-,2792	,3296
Anger (Kızgınlık)	Original	Mixed	,10294	,13920	,741	-,2281	,4330
		Non	,13471	,13817	,590	-,1929	,4643
	Mixed	Original	-,10294	,13920	,741	-,4330	,2281
		Non	,03277	,14016	,970	-,3006	,3661
	Non	Original	-,13471	,13817	,590	-,4643	,1929
		Mixed	-,03277	,14016	,970	-,3661	,3006
Fear (Korku)	Original	Mixed	-,04412	,16740	,962	-,4423	,3440
		Non	,02143	,16617	,991	-,3738	,4166
	Mixed	Original	,04412	,16740	,962	-,3440	,4423
		Non	,06555	,16856	,920	-,3344	,4664
	Non	Original	-,02143	,16617	,991	-,4166	,3738

Dependent Variable	(I) Product Set	(J) Product Set	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
		Mixed	-,06555	,16856	,920	-,4664	,3344
Contempt (Küçümseme)	Original	Mixed	-,45425	,20852	,080	-,9502	,0417
		Non	-,12063	,20698	,830	-,6129	,3717
	Mixed	Original	,45425	,20852	,080	-,0417	,9502
		Non	,33361	,20996	,255	-,1658	,8330
Satisfaction (Memnuniyet)	Original	Original	,12063	,20698	,830	-,3717	,6129
		Mixed	-,33361	,20996	,255	-,8330	,1658
	Mixed	Original	,09150	,30742	,952	-,6397	,8227
		Non	,33444	,30515	,499	-,3813	1,0702
Happiness (Mutluluk/Sevinç)	Original	Original	-,09150	,30742	,952	-,8227	,6397
		Non	,25294	,30954	,693	-,4833	,9892
	Mixed	Original	-,33444	,30515	,499	-1,0702	,3813
		Non	-,25294	,30954	,693	-,9892	,4833
Boredom (Sıkılma)	Original	Mixed	,17810	,31431	,838	-,5695	,9257
		Non	,10079	,31200	,944	-,6413	,8428
	Mixed	Original	-,17810	,31431	,838	-,9257	,5695
		Non	-,07731	,31649	,968	-,8300	,6754
Shame (Utanç)	Original	Original	-,10079	,31200	,944	-,8428	,6413
		Mixed	,07731	,31649	,968	-,6754	,8300
	Mixed	Mixed	-,04575	,21469	,975	-,5564	,4649
		Non	-,40794	,21311	,140	-,9148	,0989
Boredom (Sıkılma)	Original	Original	,04575	,21469	,975	-,4649	,5564
		Non	-,36218	,21617	,220	-,8763	,1520
	Mixed	Original	,40794	,21311	,140	-,0989	,9148
		Non	,36218	,21617	,220	-,1520	,8763
Shame (Utanç)	Original	Mixed	-,06699	,12841	,861	-,3724	,2384
		Non	,02460	,12746	,980	-,2785	,3278
	Mixed	Original	,06699	,12841	,861	-,2384	,3724
		Non	,09160	,12929	,759	-,2159	,3991
Shame (Utanç)	Non	Original	-,02460	,12746	,980	-,3278	,2785
		Mixed	-,09160	,12929	,759	-,3991	,2159

* The mean difference is significant at the .05 level.

Table E. 7 Mean Values of Positive Emotions

	Original	Mixed	None
Arzum	2,055556	2,098039	2,187302
Braun	2,222222	2,179739	1,857143
Philips	2,490741	2,856209	2,031746
Sinbo	1,453704	2,003268	1,825397
Tefal	2,62963	2,614379	2,511111

Table E. 8 Mean Values of Negative Emotions

	Original	Mixed	None
Arzum	1,70679	1,617647	1,577778
Braun	1,509259	1,630719	1,47619
Philips	1,339506	1,388889	1,555556
Sinbo	2,070988	1,745098	1,730159
Tefal	1,283951	1,339869	1,288889

APPENDIX F

Table F. 1 Keywords and Keyword Groups Mentioned for Iron-1

	ARZUM		SINBO		N (+)	N (-)
	O (+)	O (-)	M (+)	M (-)		
Brand Related						
Being aware of the brand	4	3	5	12		
	4	3	5	12	0	0
Emotion-Related						
cute	1		3			
fun	5	1	3	1	7	
like	1	3		2	2	
ugly		1				
like	2					
masculine						1
feminine		1			1	
	9	6	6	3	10	1
Function & Usability Related						
controls	1	6		3	7	3
function	1			1	2	2
quality	1	2				
handling			1			
usage-easy to use	0				2	
	3	8	1	4	11	5
Visual						
base color	1	6	2	4	2	5
bulky		1		1		
color	13	18	14	12	12	11
design	2	3	4	3	1	
form	5	6	3	4	6	
imitation				4		
material			1		1	1
old fashioned	1	6		8		4
simple					2	
toy like				1	1	
visual appearance	1	1	2		1	
	23	41	26	37	26	21

The numbers indicate how many times the keyword is declared

Table F. 2 Keywords and Keyword Groups Mentioned for Iron-2

	BRAUN		PHILIPS			
	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
Brand Related						
Being aware of the brand	8	3	12	0	0	0
	8	3	12	0	0	0
Emotion-Related						
cute	1		1		2	
fun	9		3	1	4	
like	1	4	3			2
ugly				1		
	11	4	7	2	6	2
Function & Usability Related						
controls	1		2		2	3
function		2		1		2
security		1				
ergonomics	1		1			
handling	2	3	4	2	3	1
usage-easy to use		3	3	2		
	4	9	10	5	5	6
Visual						
complicated		1				
quality	1					
bare				2		
bulky				1		
color	13	10	12	13	6	18
general appearance	3	5	9	7	2	6
form	11	7	4	9	10	9
material			1	3		2
old fashioned	2					6
simple	1	2				1
technology	1					
toy like				2	3	
transparency			2			
	32	25	28	37	21	42

The numbers indicate how many times the keyword is declared

Table F. 3 Keywords and Keyword Groups Mentioned for Iron-3

	PHILIPS		TEFAL			
	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
Brand Related						
Being aware of the brand	6	0	16	0	0	0
	6	0	16	0	0	0
Emotion-Related						
cute	1		1			
fun	1		4	1	3	
like	2	1	1	1	1	4
masculine	1			2		
	5	1	6	4	4	4
Function & Usability Related						
complicated				1		1
controls	2		2	1		1
function	4		4		3	3
properties			1			
quality					1	
ergonomics	2					
handling	2	2			1	1
usage-easy to use	2		3	1	1	
	12	2	11	5	6	6
Visual						
color	21	4	16	3	8	11
design	14	2	8	4	5	4
different	1					
elegant	1					
form	13	1	10	5	6	9
gray form	2	9	3	13	5	12
material	1		1		1	
old fashioned				1		1
simple						2
technology	2		1		1	1
transparency	5		3		2	
visual appearance	1				2	3
	61	16	42	26	30	43

The numbers indicate how many times the keyword is declared

Table F. 4 Keywords and Keyword Groups Mentioned for Iron-4

	SINBO		BRAUN			
	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
Brand Related						
Being aware of the brand	1	14	17	4	0	0
	1	14	17	4	0	0
Emotion-Related						
fun		2	1		4	
Like	1	3		7		0
	1	5	1	7	4	0
Function & Usability Related						
controls		3	2	2	3	3
function				2	1	1
properties			2			1
quality		3				1
security		1				
handling		1			2	1
usage-easy to use	0			8		2
	0	8	4	12	6	9
Visual						
bare		2		2		
bulky		1		2	1	2
color	2	13	8	10	7	11
compactness					1	
design		11	3	6	1	6
form	2	14	4	15	9	14
material		3		6	1	
old fashioned		5		4		4
simple	1	6		9	2	10
toy like		2		4	1	1
transparency			1			1
ugly		2		1		
visual appearance				2	2	1
	5	59	16	61	25	50

The numbers indicate how many times the keyword is declared

Table F. 5 Keywords and Keyword Groups Mentioned for Iron-5

	TEFAL		ARZUM			
	O (+)	O (-)	M (+)	M (-)	N (+)	N (-)
Brand Related						
Being aware of the brand	12	2	11	3	0	0
	12	2	11	3	0	0
Emotion-Related						
cute			4		1	
feminine	1		3			
fun		1	7	1	2	
like	0	1	1	1	0	1
	1	2	15	2	3	1
Function & Usability Related						
controls	6	1	3	1	7	1
function	1		2		5	
security					1	
ergonomics	2					
handling	2				2	2
usage-easy to use	2	1	1	1	1	2
	13	2	6	2	16	5
Visual						
color	15	3	16	5	18	2
complicated		1		1		1
crowded						1
design	11	4	11	3	6	2
form	10	8	10	5	15	4
imitation				1		
material	1	1	1			
modern	1					
old fashioned		1				
technology	2			1	5	
toy like				1		
transparency	2		3		5	
ugly		1				
visual appearance			2			
	42	19	43	17	49	10

The numbers indicate how many times the keyword is declared