

MEASURING EMOTIONS IN A MARKETING CONTEXT

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Abstract

The paper is concerned with the measurement of emotions and the study of the role of emotions in consumer choice. Contemporary neurological findings suggest that emotions may play a role in its own right, quite different from the way in which they have been considered in traditional consumer choice behaviour theory. A large-scale study including 800 respondents, covering 64 brands, provide findings on emotional response tendencies for the brands, and relate these to involvement, type of need gratification, purchasing behaviour, etc.

Key words: Emotions, feelings, brand value.

Introduction

The concept of affect has undergone changes in the last half century. Today, most authors would agree with contributors such as Erevelles (1998), Bagozzi et al. (1999) in making a distinction between affective and cognitive processing. Basically, the cognitive processing term is reserved for the kind of multi-attribute evaluation of information in connection with choices among alternatives.

Erevelles (1998) and Bagozzi et al. (1999) rather than multi-attribute modelling talk about two parallel types of modelling: cognitive and affective. Petty et al.'s (1983) distinction between central and peripheral processing is in line with this, and Janiszewski (1988 and 1990) when documenting how affective processing can occur independently of cognitive processes, also proposes that the two kinds of processes should be studied separately.

As to what feelings or emotions we should look for, many suggestions are made (Izard, 1977, Plutchik, 1980 and Ekman, 1980). As an example the latter talks about both feelings or emotions: Anger, disgust, fear, joy, sorrow and surprise.

Emotions in Contemporary Neurological Research

The access to advanced scanning technology particularly functional Magnetic Resonance Imaging (fMRI) has brought the attention to the importance of those emotional processes preceding any kind of cognition. (Le Doux, 1998 & 2000 and Damasio, 1993 & 2003). The concern has not so much been with the feelings that accompany these emotions (such as fear, happiness, anger, etc.). Rather with their basic nature as positive and negative. Positive emotions are associated with approach behavior and pleasure. Negative emotions are associated with avoiding behavior and sorrow. In the view of this research tradition, emotions are seen as different from feelings. Feelings are the conscious or unconscious accompanying cerebral brain processes. Emotions are more basic processes largely occurring in the inner and oldest part of the brain.

The different way in which traditional psychologists and laypersons are viewing the words feelings and emotions has created some confusion. Bechara and Damasio (2005) thus introduce the somatic marker hypothesis largely as a substitute for their earlier use of emotions as a description of the unconscious primarily in the inner brain as occurring emotions. We shall, however, in the present context not go so far, but talk about emotions as unconscious processes, occurring in the inner and most primitive parts of the brain. The nature of these processes can be identified in more primitive animals, than man, also. We shall, however, first dwell a little with distinction between feelings and emotions as it appears in more recent literature.

Emotions and Feelings

One of the things we now know about memory is that when we are experiencing something, if it is fully processed, all of its component parts will be stored in various parts of our memory. One of the components of that experience that will be stored is any emotion that is associated with it, in our nondeclarative emotional memory. When a memory is recalled, all of the component parts are reunited from the various areas of the brain, and that includes the emotional memory associated with the experience.

What this means is that our experiences with brands, as retained in memory, will include our emotional associations with the brand. In a very real practical sense, if we can measure the emotions associated with a brand, it will enable managers to better understand it, better position it, and importantly work toward optimizing positive emotional associations in memory. Before we introduce a new method for measuring the emotional associations with brands, we will elaborate a little more on just exactly what we mean by 'emotion.'

We certainly all experience 'feelings' which we think of as emotions, and they certainly relate in most cases. But the concept of emotions goes beyond this and is perhaps best understood within the context of something called affect program theory. These primary emotions are a basic part of our being human, and appear to be unrelated to culture. There is great similarity in the way in which they function.

This is very important because it means that primary emotions are the same for everyone. While the basic emotions comprising the affect program are fundamental to all humans, Damasio (2000) and Le Doux (1998) believe that secondary emotions (emotions like embarrassment or guilt) are to some extent *acquired*, and triggered by things people have come to associate with that emotion through experience. Because of this, it makes sense to think about 'emotions' as the base neurological process, and emotional response as 'feelings,' or how we experience and articulate our emotions.

Even though our emotions, through the feelings they give rise to, especially primary emotions, have limited involvement in the actual cognitive processing controlling long-term action, they nonetheless will be strongly integrated into the cognitive processes leading to long-term planned action. In a very real sense, emotional responses 'frame' conscious cognitive processing. This is why if we understand the emotional associations with a brand in memory, advertising (or other marketing communication) that elicits emotional responses consistent with the brand should help reinforce positive brand attitudes as well as purchase intentions formed as a result of that advertising.

This works because feelings aroused by emotions are part of a cognitive process that actually leads to logical thinking, even though emotional memories are stored out-of-consciousness. Damasio has argued our reasoning is significantly influenced by both conscious and unconscious signals from the neural networks associated with emotion. We all acquire emotional memories related to experiences with different things (for example brands), and these emotions are unconscious and independent of any conscious memories or understandings we might have of those same things. So when we think about something, while we are conscious of what we 'know' about it, our thinking will also through feelings be informed by our conscious emotional memory.

Measuring Emotion-Brand Associations

There are emotional memories associated with everything we experience, and this includes brands. If we can come up with a reliable and usable battery of scales to measure the emotions and the related feelings associated with a brand, we will have a powerful tool for understanding brands, and how to position them to capitalize upon positive emotional association in the brand's marketing communication.

Table 1

Categories Within The Rossiter-Percy Grid Included in Study

	Informational	Transformational
Low Involvement	Shampoo Pain Killers Detergents Gasoline	Coffee Cereal Bread Cosmetics
High Involvement	Cell Phone Coupons Computers TV Sets Banks	Perfume Cars Airlines Amusement Parks

Toward that end, an ambitious study was undertaken where we looked at 16 product categories covering 64 brands. Each of the four quadrants of the Rossiter-Percy (1999) grid was represented (see Table 1). In choosing the categories and brands, the leading brands in the category were included, along with one or two others (where available) with unique images. A random sample of consumers was pre-recruited by telephone and asked to participate in a study of feelings for brands and product categories. Subjects were randomly assigned to four groups, each representing four of the 16 categories, and mailed a self-administered questionnaire. Field work was carried out by TNS/Gallup in Denmark. The response rate was 67%.

Emotion Scales

In the psychology and consumer behaviour literature, and even in the marketing literature (Richins, 1997), there are numerous batteries of scales for 'measuring' feelings (sometimes labeled emotions). We initially considered simply using an established set of scales, but we were concerned that when people talk about their feelings for things like adverts or brands they may not mean exactly that same thing that one might infer from a particular scale. If you are talking about your feelings toward, say, an advert, are you really 'happy' or 'sad' or 'angry'? Perhaps, but more than likely people probably pick the feeling word that comes closest to describing their feelings.

A general observation most studies have (Shaver et al., 1987; Hansen, 2005) is that the response to all feeling scales reveals an underlying positive and a negative dimension. These two emotional dimensions are of great importance for the understanding of the responses to alternative brands.

To develop a set of scales in measuring the emotions associated with adverts and brands, to be certain that we really understand what people want when they check a feeling scale, we conducted a pre-test using adverts as stimuli. Four different adverts representing the four quadrants of the Rossiter-Percy brand attitude strategy grid were exposed to a sample of graduate students at the Copenhagen Business School. Among other questions, we asked what emotions or feelings they were experiencing as they read the advert. We later asked them to use a battery of feeling word scales culled from the literature. An analysis was conducted relating the expressions of emotion or feeling experienced with the responses checked from the battery of scales. This resulted in a set of 24 items.

Analysis

One of the goals of the analysis was to come up with a reduced set of scales that would be reliable and easily used in advertising and brand research. Toward that end, a factor analysis of the profiles for each brand and each category was conducted. After reviewing the various rotations, a decision was made to concentrate on 2-factor solutions that reflected in each case a strong positive-negative distinction. As an example, the original principal component analysis for Dove shampoo yielded a 7-factor solution, using the traditional cut-off of an Eigen value of one. But the 2-factor solution accounted for 41% of the total variance and clearly identified a positive vs. negative set of emotional responses. By eliminating those items that did not load highly on either factor, a set of 14

scale items was selected and re-factored. By then looking at only the items with high loadings, a battery of 10 items (6 positive and 4 negative) resulted (see Table 2). A similar procedure was conducted for each of the 16 categories and 64 brands.

Table 2

Rotated Component Matrix for Dove. 10 item reduced battery(Explained Variance 56%)

	Factor 1	Factor 2
Desire	.585	.004
Stimulating	.737	.019
Happy	.900	.004
Fine	.680	-.033
Fresh, healthy	.752	-.044
Pretty	.822	.011
Critical	-.005	.753
Doubt	-.021	.719
Worry	.007	.539
Annoying	-.014	.898

Scores were then calculated for each subject based upon the intensity of felt emotion (for each ‘checked’ feeling statement subjects ranked how strongly they felt it applied on a 6 point scale) and the factor loadings to produce a positive and negative score for each brand, category, and quadrant from the Rossiter-Percy grid. Figure 1 illustrates the scores for the brands in the Shampoo category.

Insights from measuring Emotion-Brand Associations

Looking at the emotional associations people have with brands, as we have suggested, can provide important insights into how people perceive brands. Looking again at the scores in Figure 1, we see that people have strong positive emotional associations with both Dove and Sanex. But in the case of Head and Shoulders, we find that both positive *and* negative emotions are associated with the brand in memory. Clearly, people’s emotional experiences of Dove and Sanex are quite different from their experience of Head and Shoulders. (We, of course, are using the term ‘experience’ in its broadest sense, not to mean actual usage.) Looking at the emotional intensity scores for the shampoo category, we find that Sanex, and to a somewhat lesser degree Dove, reflect the feelings associated generally with the category.

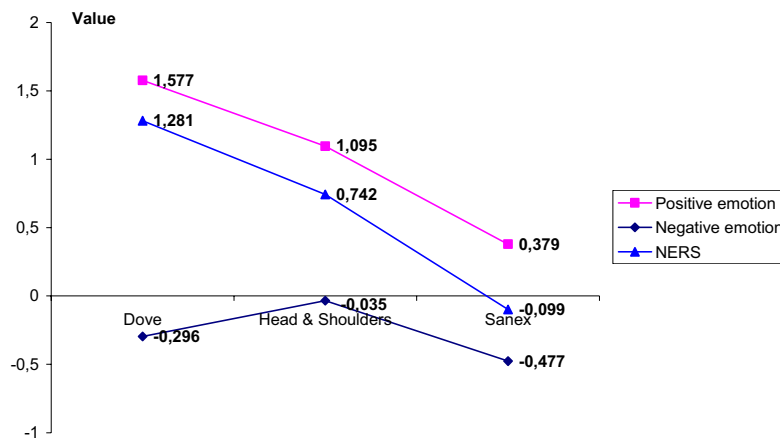


Fig. 1. Emotional Intensity Scores for Shampoo Brands

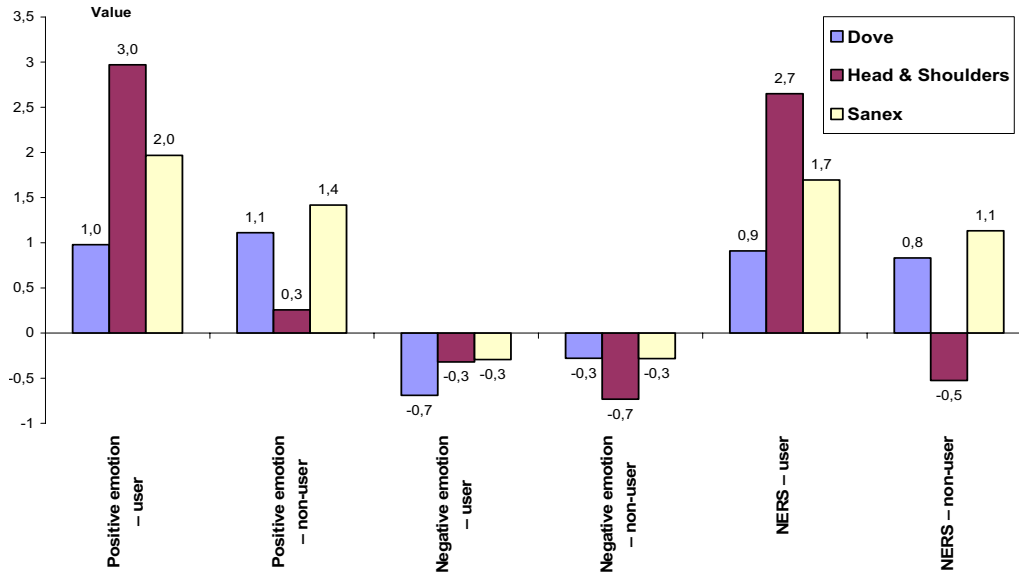


Fig. 2. Emotional Intensity Scores for Shampoo Brands: Users vs. Non-Users

The explanation for the atypical Head and Shoulders scores is found when we look at users vs. non-users (see Figure 2). Non-users associate negative feelings with the brand, but users have very positive emotional associations with the brand. Clearly, the non-users mix emotional responses to dandruff with those of the brand. On the other hand, both users and non-users of Dove and Sanex associate positive emotions with those brands. We shall not speculate upon these findings, but they do illustrate how useful measures of emotional associations with brands can be.

One final example will further illustrate this. Figure 3 presents the emotional intensity scores for the television set category. Those familiar with these brands will know that B&O has positioned the brand in recent years to a more transformational brand attitude strategy, specifically encouraging a more emotional than reasoned reason for buying the brand. Their success is clearly illustrated in the significantly higher positive emotional associations with the brand.

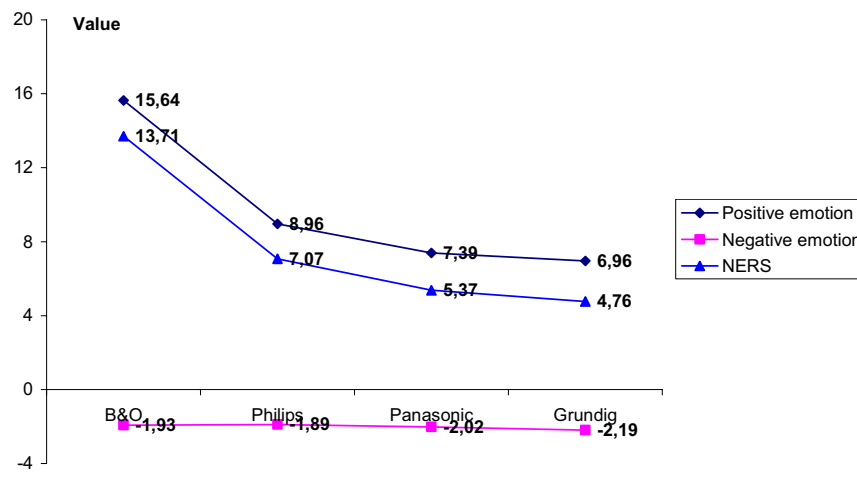


Fig. 3. Emotional Intensity Scores for Television Set Brands

In this sense the NERS score may be seen as a measure of that part of brand equity which is not determined by market factors such as price, availability, technical quality, etc., but rather reflects the inherent intrinsic value of the brand. In exhibit 1, we give the scores for the different brands and categories included in the study. It is remarkable here to find over 9 brands scoring higher than the category per se. These may truly be seen as outstanding brands with high value build into the brand name. The fact that brands such as Tivoli, Legoland, Bang & Olufsen are among these is not surprising in a Danish context.

Summary

Emotions and feelings are a key part of our experiences, and will be associated with those experiences in memory. Our experiences with brands, whether in terms of actual use or simply an understanding of them, will have emotional associations linked to them in memory. By measuring the emotional associations with brands managers will have another important tool for better understanding their brand and for developing advertising communication strategy.

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Exhibit 1

Emotional Response Strength Scores and Net Emotional Response Strength Scores (NERS) for Categories and for Brands

		Positive	Negative	NERS	Brand	Grid
Low Involvement/Informational	Valid N	Strength	Strength		Average	Average
<i>Shampoo Category</i>	63	7.294	1.597	5.697		
Dove	40	4.981	1.604	3.377		
Head & Shoulders	29	2.376	2.996	-0.620		
Sanex	42	6.833	1.281	5.552	2.770	
<i>Gasoline Category</i>	65	4.334	0.283	4.051		
Shell	20	2.842	-0.090	2.933		
Hydro Texaco	35	6.851	0.704	6.148		
OK Benzin	42	3.509	0.682	2.827		
Q8	24	4.484	0.202	4.282	4.047	
<i>Detergent Category</i>	47	4.249	0.653	3.596		
Ariel	25	4.575	0.526	4.049		
Bio Tex	39	4.158	0.945	3.213		
Neutral	30	3.300	0.624	2.677		
Persil	13	2.794	0.560	2.234	3.043	
<i>Pain Killers Category</i>	49	4.562	1.177	3.384		
Panodil	35	4.542	0.784	3.758		
Magnyl	22	4.333	0.836	3.497		
Aspirin	14	3.875	0.757	3.118	3.457	3.360
Low Involvement/Transformational						
<i>Coffe Category</i>	52	8.952	1.199	7.754		
Merrild	52	8.269	1.896	6.374		
Gevalia	44	6.157	0.956	5.201		
BKI	32	4.880	0.805	4.075		
Karat	29	4.534	0.602	3.932	4.895	
<i>Cereal Category</i>	80	8.622	1.146	7.476		
Kelloggs	48	8.452	1.411	7.041		
Guldkorn	32	7.695	1.154	6.541		
Ota	38	7.037	1.057	5.980	6.521	
<i>Bread Category</i>	79	8.398	0.996	7.402		
Wasa	45	6.783	0.843	5.939		
Schulstad	52	6.763	0.835	5.928		
Kohberg	50	7.240	1.081	6.158		
Hatting	43	8.441	1.182	7.259	6.321	
<i>Cosmetic Category</i>	69	11.264	2.215	9.050		
Nivea	39	8.150	1.376	6.774		
Max Factor	28	8.833	1.818	7.014		
Maybelline	18	7.599	1.476	6.123		
Pierre Robert	21	9.282	1.491	7.791	6.926	6.142
High Involvement/Transformational						
<i>Perfume Category</i>	78	9.67	1.02	8.65		
Hugo Boss	45	7.10	1.72	5.38		
Laura Biagiotti	17	9.16	2.50	6.66		
Van Gils	16	7.26	2.10	5.16		
Ninna Ricci	4	8.81	2.17	6.64	5.96	

Exhibit 1 (continuous)

		Positive	Negative	NERS	Brand	Grid
High Involvement/Transformational	Valid N	Strength	Strength		Average	Average
<i>Cars Category</i>	83	9.19	0.82	8.37		
Fiat	58	3.24	3.17	0.07		
Skoda	51	2.84	2.81	0.03		
Toyota	59	7.02	1.45	5.57		
Citroen	52	6.91	1.54	5.37	2.76	
<i>TV-Sets Category</i>	71	7.62	2.74	4.88		
B&O	70	15.64	1.93	13.71		
Philips	46	8.96	1.89	7.07		
Panasonic	29	7.39	2.02	5.37		
Grundig	21	6.96	2.19	4.76	7.73	
<i>Amusement Parks Category</i>	90	9.70	1.19	8.51		
Tivoli	90	12.49	1.25	11.24		
LEGOland	72	11.04	1.18	9.86		
Bon Bon Land	30	8.01	1.76	6.25		
Bakken	62	7.90	1.63	6.27	8.40	6.21
<i>High Involvement/Informational</i>						
<i>Cell Phone Companies Category</i>	68	9.65	3.75	5.90		
Sonofon	48	6.97	3.76	3.22		
TDC	46	7.28	5.79	1.50		
Orange	27	7.05	5.76	1.30		
Telia	28	5.65	6.24	-0.59	3.74	
<i>Computers Category</i>	70	9.42	2.74	6.68		
Dell	16	7.21	1.23	5.98		
Apple Macintosh	15	7.44	1.77	5.67		
Fujitsu Siemens	12	8.08	2.08	6.00		
Hewlett Packard	20	9.44	2.88	6.57		
IBM	25	9.34	2.86	6.49	6.14	
<i>Airlines Category</i>	62	6.55	2.21	4.34		
Maersk Air	56	6.72	1.71	5.02		
SAS	55	6.07	3.00	3.07		
Sterling Airways	30	4.87	1.40	3.47		
Krone	3	7.00	5.21	1.78	3.34	
<i>Banks Category</i>	62	7.40	3.63	3.77		
Danske Bank	48	7.10	4.64	2.45		
Nordea	37	7.89	4.36	3.54		
BG Bank	34	3.76	3.76	0.00		
Alm. Brand Bank	15	8.30	4.53	3.76	2.44	
<i>News Papers Category</i>	35					
Berlingske Tidende	14	7.29	2.36	4.92		
Politiken	23	6.98	2.02	4.96		
Jyllands Posten	28	5.38	1.88	3.50		
BT	23	6.19	2.17	4.03		
Ekstra Bladet	24	6.01	3.85	2.16	3.91	4.89