IS THE TIME OF RESPONSE A FACTOR THAT DETERMINES THE BRAND RECALL/IMAGE?

Laura Fischer
Facultad de Contaduría y Administración (FCA) in the, Universidad Nacional Autonoma de Mexico (UNAM)
Oscar Zamora
David Chavez
FCA-UNAM

Abstract

Branding aims to establish a significant and differentiated presence in the market that attracts and retain loyal customers. Hence,some of the elements for the brand awarenessarethe use of highly emotional images and the time of exposure of the announcement. In this experimental study, the main purpose was to determine if there is a relationship between the time of response and the brand recall on affective images (IAPS). However, one hundred and forty eight (148) students from universities in Mexico City participated in this study, and the results suggested that the time of response is not a factor that determines the brand recall.

Keywords: Brand recall, time of response, emotional

Introduction

People in charge of marketing in companieshave applied different strategies, in ascertaining whether or not the brand and/or product are the first to be recalledwhen someone is trying to satisfy a need.Therefore, when a product has been registered in the consumer's mind,they would always think in our brand, before any other brand,in the momentthey are faced with the purchase of a product. Though,it is an arduous job and an important challenge for marketing experts and publicists.(e.g. Kotler and Armstrong, 2004; Garnica and Maubert 2009; Fischer and Espejo 2012; Kerin, Berkowitz, Hartley and Rudelius 2003; Stanton, Etzel, and Walker 2007, etc.).

The brand is considered to be part of the product (Urde, 1999; Kotler, 2000). With the evolution of communication media and saturation of the markets(Ries and Ries, 2002),emphasis has changed from considering the brand as a strategic value of the Company to focus on various marketing and communication actionin the making of the brand (O'Guinn *et al*. 2004).

For the creation andmanagement of the brands' value from a marketing perspective, the consumer's view and its perception of the brands must be considered (Chernatony, 1993).There are mainly four essential aspects for consumers to give value to a brand (Aaker and Joachimsthaler, 2000): its quality perception, the level of trust, image and visibility. Thus, understanding brand awarenessis an intangible quality or asset basedon the capability of the consumer to recall or recognize the same at the level of his external signs. (Rossiter, Percy and Donovan, 1991; Holden and Lutz, 1992; cited by Del Moral 2007 p. 1). The presence of the brand in the consumer's mind (Aaker, 1996) is related with the ability to be identified or recalled under different conditions(Rossiter and Percy, 1985) and its correct connection to the category to which it belongs (Keller, 1993; Aaker y Álvarez, 1994). Brand awarenessis formed by two components: brand recall and brand recognition. The first one is related with the capability of locating the brand in a category of products, while the second one is related with the capability of confirming a previous exposure,i.e. the consumer is capable of discriminating it for having seen or heard it before.

The existing bibliography with regards to the brand awarenessis extensive. But until this date,it has been fundamentally studied from the perspective of its usefulness, either from an advertisement perspective(Rossiter and Percy, 1985; Krugman, 1986; Singh, Rothschild, and Churchill 1988; Miller and Berry, 1998), from a perspective of brand asset (Keller, 1993; Kapferer, 1993; Aaker, 1996), or from a perspective of its influence in the analysis of consumer's behavior(Ratneshwar and Shocker, 1991).

In the brand awareness, this type of measure corresponds to the identification of certain levels of brand awareness, such as: spontaneous or suggested, or to techniques based on the memory and focused on the recall and its intensity (Higie and Sewall, 1991). The premise is that advertisement would be more effective if it generates a higher level of recall(Sánchez Franco, 1999), and recall is the result of the intensity of the impact of the message (Krugman, 1986).

There are factors or elements that may fosterthe best codification and recovery of the brand as well as the essence of the advertising message. In this line, some authors (Franzen, 1994; Stewart and Furse, 1986, Sáiz, Baqués, and Sáiz 1999) have enumerated the factors of recall, grouping them into those that favored the recall and those that have negative effects on such recall.Thus, some of the factors that facilitates the evocationor recovery of the recall include a good name of the brand, visual elements that facilitate the recognition of the brand, an adequate number of repetitions of the brand, the product image and the emotional aspects related to the brand.

As it has been mentioned, one of the relevant factors in the brand recall is the combination of an image, given that images by themselvesgenerates emotion. In studies performed with more than 1200 affective images IAPS (*International Affective Pictures Systems*), (e.g. Lang 1994; Lang, Bradley, and Cuthbert 2005; Moltó, Montañés, Poy, Segarra, Pastor, Tormo, Ramírez, Hernández, Sánchez, Fernández and Vila, 1999; Ostrosky and Chayo-Dichy, 2003; Vila, 2001; etc.), the emotional power that image generates on individuals has been evaluatedfrom a psychological point of view. Using these imagesby inserting on them brands positioned in the market, it may benefit the effectiveness of an announcement which captures the attention of a targeted groupthat is bombarded by hundreds of messages daily in seconds:posters, billboards, images on social networks, etc. Images that people see for instantsarouse their interest on the product that has been offered so they can make purchase. Other factor already mentioned which is related to brand recall, is the time of exposure that allows the announcement to pass from an unconscious stage to aconscious stage.

The study pretends to verify if the participantsthat did not make an automatic evaluation of the image/brand supposes that this image/brand entered into the conscious stage. Hence, this is because the participants took more time to respond/react to the evaluation of the image/brand. This may infer that there isa higher grade of analysis or conscience of the participant;and therefore, would recall those brands/images that took more time to respond, thereby establishing a relationship between the time of response on affective images and the brand recall?[81]

In connection with this brand, the following hypothesis was raised:

H_0= There is no relationship between affective images (positive, neutral and negative) and the time of response

$H_{0=}$ There is no relationship between the time of response and the brand recall /image.

Independent variable: Time of response that participants took to evaluate each one of the images

Dependent variable: brand recall / image

Method

This study is experimental. 90 images were chosen from the *International Affective Picture System*(IAPS) taken from the bio informational model of Lang (1994), with high emotional baggage (30 positive images, with values between 6 and 9 points, 30 negative images

[81]The response time was the period of time elapsed between the appearance of the scale (1 to 9) and the response of the participants; the result is given in a range of milliseconds (1000 msec. = 1 sec).

with values from 1 to 3, and 30 neutral images with values between 4 and 5). At the same time, 30 brands positioned in the Mexican market were taken, and chosen from the list of *BrandZ, Millward Brown top* 100 (2012). Each one of these brands was inserted in one positive image, in one neutral and in one negative (example: exhibit 2). The images were evaluated taking the same evaluation ranges of Lang (2004); a Likert scale of nine intervals, where 1 is totally unpleasant (dislike) up to 9, which is totally pleasant (like).

In the research, 148 university students between 19 to 25 years old participated; the sample was made up of 41.4% men and 58.6% women. Participants performed the task individually using a computer in which a SuperLab 4.1 software program was installed. Thus, this software helpsin registering the responses of the user immediately. During the session, the participant saw 90 screens corresponding to each one of the images/brand, which were shown in intervals of 5 seconds to observe them, and 5 seconds for its evaluation. The task which was indicated to the participant in connection with this independent variable was to enter the number of evaluation using the keyboard when the scale Likert type appeared on the screen (with values from 1 to 9). When finishing the sequence of 90 images, the people wrote in the computer the first image/brand they recall (*ontopof their mind*), followed by their subsequent memory (second and third mentioned).

The presentation of images, the capture of responses and its time of response were performed in a computing laboratory in the Faculty of Accounting and Administration UNAM, using JAVA program in 65 computers

Findings

The time of response that participants had for all the positive, neutral and negative images was 0.857 milliseconds in average, and with a standard deviation of 0.052 milliseconds. The global average response was compared with the average time of response for each type of image, with the purpose of knowing the images in which individuals took more time to respond to. Likewise, to identify the images that received uniformed grades and/or with great disparity (Table 1.1, exhibit 1), the global standard deviation was contrasted as a reference measure with the deviations of each type of image as shown in the results in table 1.2.

Table 1.2 Average of the time of response /response in affective images

IMAGE	GLOBAL	POSITIVE	NEUTRAL	NEGATIVE
AVERAGE	857	864.5	849.7	855.8
DESVEST	52	42.7	64.4	46.8

*Amount in milliseconds

The results of the total average and the average standard deviation of all images (Table 1.2) were taken as a base or reference to contrast the average times and deviations of response that each group of affective images obtained (positive, neutral and negative). The intention was to know if there was a significant difference between the average and average deviations of each group of images; with the purpose of identifying which were the images /brand in which individuals took more time for its evaluation. The foregoing suggested performing an analysis of the variance (ANOVA) of a path. Hence, the level of trust with which this analysis was made was 99%, with 0.01 level of significance.

	Sum of squares		**GL**		**Quadratic dispersion**		**F**
Source of the variation	**SST**	3,343.88	**K-1**	2	**SST/(k-1)=MST**	1,671.94	**MST/MSE**
Error	**SSE**	236,676.70	**n-k**	87	**SSE/(n-k)=MSE**	2,720.42	
Total	**SS total**	240,020.58	**n-1**	89			0.61458912

*Amount in milliseconds

The reported results of the grades of freedom given the number of treatments (variables) and ***n*** data for each case (2/87 gl), has a critical value of 6.96 for a test of two queues (from -6.96 to 6.96) as the result. The value of the statistics of F test which resulted to0.6145 is within the zone of acceptance of the first **null hypothesis**.Therefore, it is concluded that: *There is no relationship between the affective images (positive, neutral and negative) and the time of response.*

To make a relationship between the time of response and the brand recall/image, each one of the brands were taken and was analyzed. Therefore, thetype of image (positive, neutral or negative image) took more time to react and at the same time, the brand/image was compared to the percentage that was obtained.

The percentages of the variable brand recall for each group of images i.e. positive, neutral and negative were obtained from the responses of the questionnaire of the brand recall /image that was applied at the end of this study. The first, second and third mentioned were summed up for each brand/image that had more time of response and the sum was divided between the total numbers of the sample.

In order to respond to our second null hypothesis:*There is no relationship between time of response and the brand recall/image,* a spread diagram was performed between the independent variable (time of response) and the dependent variable (brand recall/image) of each one of the groups of images: positive, neutral and negative.Likewise, using statistical software in each group of images, an analysis of logistic regression was applied for

variables: “brand/image” in function of a dichotomous variable “brand” and “time of response”, with the purpose of knowing how it influences the probability of the appearance of a dichotomous event (“Brand” and “Time of response”), the presence or absence of various factors, and also the possible value and level thereof (level or grade of the brand recall /image).

Later, in order to confirm if the null hypothesis is accepted or rejected,an F test by Fisher was applied to analyze the variances and find the differences between the averages in the “time of response of images IAPS with brand” and the “times of response for each group of images (positive, neutral and negative)”. Also, the T test of Student was applied to know if there is any meaningful difference between the averages of the groups of images IAPS (positive, neutral and negative) with brand presence and the time of response that the individuals obtained for each group of images.

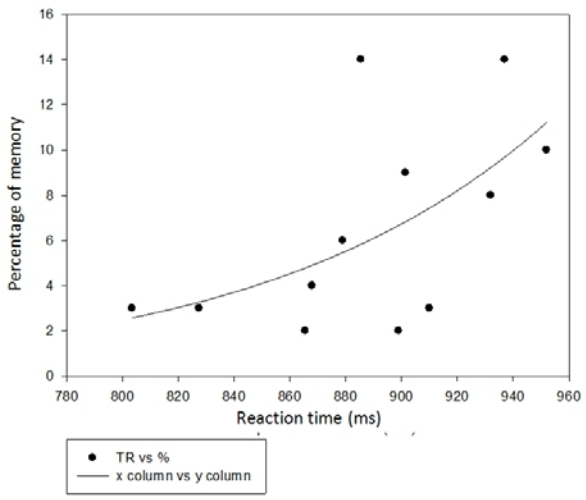
Positive images

Out of the 30 analyzed brands, 40% were inserted on a positive image, which were the ones that took more time of response. Taking the results of the times of response obtained in the positive images as reference, we proceeded to verify if these images were the ones that the individuals first remembered on the top oftheir mind, or if it is the second or the third mentioned. However, the results of the brands inserted on positive images are shown in table 1.3.

Table 1.3Results ofpositive images response time andbrand recall

Brand	Description	Response time (milliseconds)	Brand recall
Mc Donald´s	Rabbit	952	10%
Marlboro	Father	937	14%
Nike	Late afternoon	932	8%
Banamex	Mountains	910	3%
Blackberry	Beach	901.5	9%
Disney	Sailboat	899	2%
Telcel	Sky	885.5	14%
Red Bul	Rafting	879	6%
Banorte	Sea	868	4%
Gillette	Late afternoon	865.5	2%
Colgate	Baby	827.5	3%
Bimbo	Couple	803.5	3%

Figure 1.3 - Results



$R^2$is equal to 33.88% which means that the independent variable (time of response) does not explain the dependent variable (percentage of brand recall).

F Test, Statistic F estimated for 2 grades of freedom in the numerator (3 variables minus one) and 9 grades of freedom with the denominator resulted to***2.3061***, and when it is been contrasted with the critical value of ***8.02*** with the same grades of freedom in the numerator and denominator, and with a level of trust of 99%, the acceptance of the null hypothesis was determined. The 3 parameters are equal to zero and the correlation coefficient is equal to zero. Thus, the null hypothesis of *"there is no relationship between the time of response and the percentage of brand recall in positive images"* is accepted.

T Test, Right queue test, given that the parameters must be positive, in order for the percentage of the estimated memory should be positive.The critical t for 9 grades of freedom, (12 data minus 3 variables) and 99.5% of trust is ***3.25***, and it was observed that *for the 3 parameters (a, b and x0), its value is zero and* therefore the *Null hypothesis is accepted*.

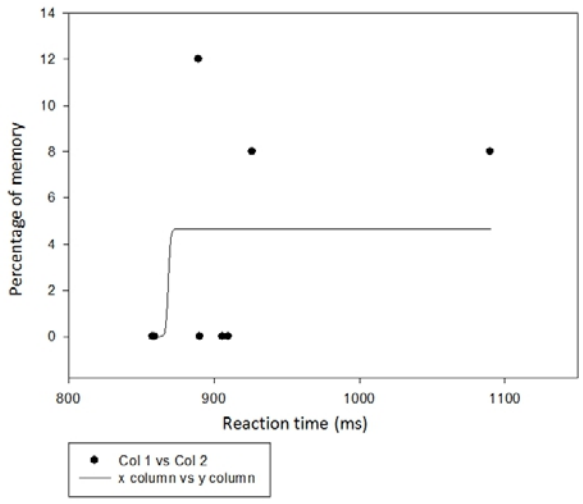
Neutral Images

Out of the 30 analyzed brands, 26.6% that were inserted on a neutral image were the ones that took more time of response. Taking the results of the times of response /response obtained in the neutral images as reference, we proceeded to verify if these images were the ones that the individuals first remembered on the top of mind, or if it is the second orthe third mentioned. The results of the brands inserted in neutral images are shown in table 1.4.

Table 1.4Results ofneutral images, response time andbrand recall

Brand	Description	Response time (milliseconds)	Brand recall
Wal Mart	Child	1090	8%
Starbucks	Auto crash	926.5	8%
Face book	Iron	910	0%
Lóreal	Boat trash	906	0%
General Electric	Woman	890.5	0%
Nintendo	Building	889.5	12%
Samsung	Office	859.5	0%
Pepsi	Traffic	858	0%

Figure 1.4 - Results



R^2 is equal to 18.77%, which is a level that is reduced andthis means that the dependent variable (percentage of brand recall), is not explained by the independent variable (time of response).

F Test, the estimated statistical Fwas ***0.5778*** for 2 grades of freedom in the numerator (3 variables minus one) and 5 grades of freedom in the denominator (8 observations minus 3 variables). The contrast with value of critical F was made for equal grades of freedom in numerator and denominator, with a level of trust of 99% which was ***13.3***. Therefore, as F is the minor estimated than F critical, the null hypothesisthat *"there is no relationship between the time of response and the percentage of brand recall in neutral images",* is accepted.

T Test, right queue test, given that the parameters must be positive in order for the percentage of memory estimated should be positive.Critical t for 5 grades of freedom, (8 data minus 3 variables) and 99.5% of trust which

was **4.032**: was observed *for the 3 parameters (a, b and x0), or that its value is zero, and therefore, the null hypothesis is accepted.*

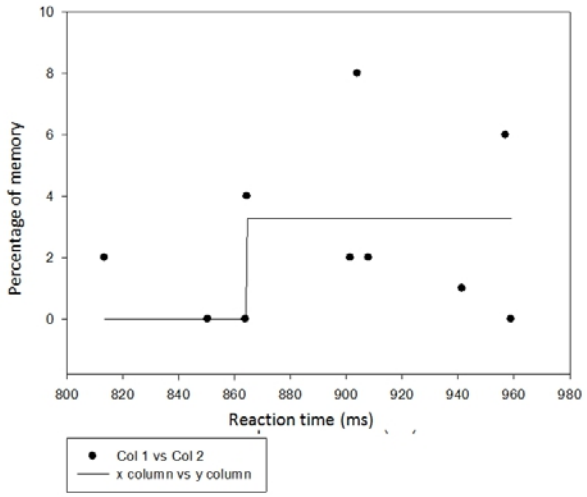
Negative images

Out of the 30 brands analyzed, 33.3% that were inserted on a negative image were the ones that took more time of response. Taking the results of the times of response obtained on the negative images as reference, we proceeded to verify if these images were the ones that the individuals remembered first on the top of their mind, or if it was the second or third mentioned. The results of the brands inserted on negative images are shown on table 1.5.

Table 1.5Results ofnegative images, response time andbrand recall

Brand	Description	Response time (milliseconds)	Brand recall
Apple	Baby	959	0%
Bacardí	Bloody kiss	957	6%
Liverpool	Hungry boy	941.5	1%
Converse	Mutilation	908	2%
Televisa	Terrorist	904	8%
Google	Grieving Fem	901.5	2%
Toyota	Mutilation	864.5	4%
Corona	Mutilation	864	0%
Microsoft	Beheaded	850.5	0%
Coca Cola	Open tomb	813.5	2%

Figure 1.5 - Results



R^2 is equal to 19.66%, which is a level that is reduced and this means that the dependent variable (percentage of brand recall), is not explained by the independent variable (time of response).

F Test, the estimate F statistical is ***0.8563*** for 2 grades of freedom in the numerator (3 variables minus one) and 7 grades of freedom in the denominator (10 observations minus 3 variables).We proceeded to the contrast with critical F for equal grades of freedom in numerator and denominator, for a level of trust of 99% which was ***9.55***. Therefore, as estimate F is minor than F critical, the null hypothesis of *"there is no relationship between the time of response and the percentage of brand recall in the negative images"* is accepted. However, the 3 parameters (a, b and x0) are equal to zero, and the correlation coefficient is equal to zero.

T Test, right queue test, given that the parameters must be positive, in order for the estimated percentage of memory should be positive. Critical t for 7 grades of freedom, (10 data minus 3 variables) and 99.5% of trust which was***3.499***: was observed *for the 3 parameters (a, b and x0), that its value is zero and* therefore, the*Null hypothesis is accepted*.

Conclusively, in the three groups of affective images (positive, neutral and negative), null hypothesis was evidenced. **"There is no relationship between time of response and the brand recall/image"**

Conclusion

Given the results obtained, both null hypothesis were accepted and it was concluded that the time of response on any type of affective imageIAPS with its respective brands, does not influence the recall(greater (higher) or lesser) of the brand in the individual. In other words, the time of response(independent variable) when it is high or above the responseof the general average of all affective images, it will not be the percentage of the brand/image recall (dependent variable). Hence,there is no correlation between the independent and dependent variables.

The fact is that it would be assumed that participants when taking more time to react for the evaluation of the image/brand, and if the evaluation was not automatic(it entered in the conscious), it may be inferred that there wasa higher grade of analysis or of conscience of the participant and, thus, would recall those brands/images that took more time to respond. This assumptiondid not happen, since there was no relationship between the time of response and the recall of the brand/image.

It was also concluded thateven if all the participants took less than a second in the evaluation of each brand/image, the brands that were shown on positive images followed by the negatives, were the ones that took more time for its evaluation. Hence, these images are highly emotional both in the

affective positive part and in the negative;and they had more time in its evaluation but not in the brand/image recall as the result.

In general, the brands presented on positive images were recalled at48.66%,(27% persons, 17% animals, 40% nature, 17% babies). As they mentioned (Franzen, 1994; Stewart and Furse, 1986, Sáiz *et al* 1999) in their investigations within the factors of memory that favor the recall stand outof the presence of known people, the appearance of little children or beautiful animals, etc., the result showseffectively that in this type of images, there was a higher recall. The brands inserted on negative images were 27.33%; and lastly, the brands inserted on neutral imageswere 21%. (Exhibit 1).

We highlighted that advertisement attempts in making known the brand of the product associated with the advantages of its purchase by all the persons that capturethe adverti.e. to generate a will of purchase associated to the brand. But we have to take into account in all case, that advertisement does not have an immediate purpose, becausefar more than the sale is the preparation to make the sale, which is equivalent to say that the persons that capture the advert are not immediate buyers, but rather they are convertedto potential buyers. However, advertising messages should be recorded in memory, because any advertisement that has not been codified or that may not be recovered is as if it never existed at the first place. Thus, this task impliesan acquisition or learning process and a further recovery or recall processsince memory acquires a fundamental role during the advertisement process.

As we have shown in the study, the images play an important role in creating attention during the announcement. The image of the brand projects must contain emotions andfeeling detonators in the consumer, which shall guarantee a place far beyond thatwhich is tangible.Thus, the brand itself may be projected as ethical and with social responsibility.

This study may serve not only to marketing professionals of consumption products but alsoto those responsible for any type of communication that looks forward toachieve more effectiveness in its messages, for example, messages sent by the government to the citizens, and preventive posters about health and social conscience messages.

Note

The result shown in this research may not be generalized to define the behavior of all young people with respect to the time of response and the brand recall, since the study was performed in a laboratory where the participants had to visualize images with brands. Therefore, they were not exposed to normal stimulus by which the advertisements were very realistic

References:

Aaker, D.A. (1996), Measuring brand equity across products and markets. *California Management Review* 38, 102-120.

Aaker, D.A. and Álvarez, R.M. (1994) Capitalizar el valor de marca. *Harvard Deusto Business Review* 61, 62-76.

Aaker, D.A. and Joachimsthaler, E. (2000) Brand Leadership. USA: *The Free Press.*

Berros, J. B. (2013). El enmascaramiento como estrategia persuasiva en la publicidad para jóvenes. *Comunicar*, *21*(41).

Chernatony, L.d. (1993) Categorizing brands: evolutionary processes underpinned by two key dimensions. *Journal of Marketing Management* 9, 173-188.

Coupey, E., Irwin, J.R. and Payne, J.W. (1998) Product category familiarity and preference construction. *Journal of Consumer Research* 24, 459-468.

Czinkota, R. y Kotable, M. (2002). *Administración de Mercadotecnia,* (2° ed.). México: Thomson, *94*

Davis, S.M. (2002) Brand asset management. USA : *Josey Bass.*

Fischer, L. y Espejo, J. (2012). *Mercadotecnia,* (4ª ed.). México: Mc Graw Hill, Franzen, G. (1994). Advertising effectiviness. Findings from empirical research. Farm Road:*NTC Publications Limited*.

Garnica, C. y Maubert, C. (2009). *Fundamentos de marketing.* México: Pearson, 168-201.

Grewal, D. Kavannor, S. Fern, EF. Costley, C. y Barnes J. (1997) : "Comparative versus

Higie, R.A. and Sewall, M.A. (1991) Using recall and brand preference to evaluate advertising effectivness. *Journal of Advertising Research* 31, 56-63.

Holden, S.J.S. and Lutz, R.J. (1992) Ask not what the brand can evoke; ask what can 25 evoke the brand? *Advances in Consumer Research* 19, 101-107.

Kapferer, J. (1993) *La marca, capital de la empresa*. España: Ediciones Deusto.

Keller, K.L. (1993) Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing* 57, 1- 22.

Kerin, R., Berkowitz, E., Hartley, S. y Rudelius, W. (2003). *Marketing* (7ª ed). México: Mc Graw Hill, 287- 288, 535

Kotler, P. y Armstrong, G. (2004). *Marketing* (10°ed). México: Pearson Prentice Hall, 188-194,201-202, 298

Krugman, H.E. (1986) Low recall and high recognition of advertising. *Journal of Advertising Research* 26, 79-86

Lang, P., Bradley, M. y Cuthbert, B. (1995). *International Affective Picture System (IAPS): Technical Manual and Affective Ratings.*NIMH Centre for the Study of Emotion and Attention, University of Florida. Lang

Lang, P.J. (1994). The motivational organization of emotion: Affect-reflex connections.En S.H.M. Van Goozen, N. Van de Poll y J.A. Sergeant (Eds.): *Emotions. Essays on emotion theory.* Hillsdale, NJ: Lawrence Erlbaum.

Miller, S. and Berry, L. (1998) Brand salience versus brand image: two theories of advertising effectiveness. *Journal of advertising research* 38, 77-82.

Moltó, J., Montañés, S., Poy, R., Segarra, P., Pastor, M., Tormo, M., Ramírez, I., Hernández, M., Sánchez, M., Fernández, M. y Vila, J. (1999). Un nuevo método para el estudio experimental de las emociones: El International Affective Picture Systeme (IAPS). Adaptación española. *Revista de Psicología General y Aplicada, 52,* 55-87.

O'Guinn, T.C., Allen, C.T. and Semenik, R.J. (2004) Publicidad y comunicación integral de marca. 3a edn, México: Thomson.

Ostrosky, F. y Chayo R. (2003). Valencia, activación, dominancia y contenido moral, ante estímulos visuales con contenido emocional y moral: un estudio en población mexicana. *Revista Española de Neuropsicología* 5, 213-225

Ratneshwar, S. and Shocker, A.D. (1991) Substitution in use and the role of usage context in product category structures. *Journal of Marketing Research* 28, 281-295.

Ries, A. and Ries, L. (2002) The fall of advertising and the rise of PR. USA: *Harper Business.*

Riu, D., & Bigné, E. (2006). La relación entre la notoriedad de marca y la inversión publicitaria en productos de gran consumo. *Departamento de Comercialización e Investigación de Mercados, Universidad de Valencia*.

Rossiter, J.R. and Percy, L. (1985) Advertising communication models. *Advances in Consumer Research* 12, 510-524.

Rossiter, J.R., Percy, L. and Donovan, R.J. (1991) A better advertising planning grid. *Journal of Advertising Research* 31, 11-21.

Sáiz, D., Baqués, J., y Sáiz, M. (1999). Factores que pueden mejorar la codificación de los mensajes publicitarios:¿ una cuestión de memoria implícita o de memoria explícita? *Psicothema*, *11*(4), 891-900.

Singh, S.N., Rothschild, M.L. y Churchill JR, G.A. (1988) Recognition versus recall as measures of television commercial forgetting. *Journal of MarketingResearch* 25, 72-80.

Stanton, W., Etzel, M. y Walker, B. (2007). *Fundamentos de Marketing (*14° ed). México: Mc Graw Hill,

Stewart, D.W. y Furse, D.H. (1986). *Effective television advertising*. Toronto: Lexington Books.

Vila, J. (2001). El sistema internacional de imágenes afectivas (IAPS), adaptación española. *Revista. de Psicología. General. Aplicada 54(4)* , 635-6657.

Exhibit1

Table 1.9Overview ofreaction andbrand recall/imagepositive images, neutral and negative

		POSITIVE				NEUTRAL				NEGATIVE			
1	**Brand**	**No. image**	**Description**	**Response time (milliseconds)**	**Brand recall**	**No. image**	**Description**	**Response time (milliseconds)**	**Brand recall**	**No. image**	**Description**	**Response time (milliseconds)**	**Brand recall**
2	Mc Donalds	1610	Rabbit	952	1%	2210	Man face	854	5%	2345	Black eye	841.5	8%
3	Marlboro	2057	Father	937	14%	2280	Child	845	6%	9405	Slice hand	868	11%
4	Nike	5829	Late afternoon	932	8%	7290	Fish	789	0%	3140	Corpse	825	3%
5	Banamex	5700	Mountains	910	3%	7137	Broken glass	850	1%	3101	Burnt face	806.5	1%
6	Blackberry	5210	Beach	901.5	9%	2441	Girl	804	1%	3030	Mutilation	846	1%
7	Disney	8080	Sailboat	899	2%	7031	Shoes	866	5%	3069	Mutilation	825	1%
8	Telcel	5982	Sky	885.5	14%	8121	Athlete	822	1%	3301	Child injured	872.5	0%
9	Red Bul	8370	Rafting	879	6%	9913	Car stuck	874	3%	9185	Dead dog	812.5	1%
10	Banorte	5825	Sea	868	4%	7013	Focus	811	2%	3062	Mutilation	783	1%
11	Gillette	5830	Late afternoon	865.5	2%	7025	Stool	738.5	0%	3063	Mutilation	844	5%
12	Colgate	2660	Baby	827.5	3%	7234	Iron donkey	799.5	2%	3130	Mutilation	820	1%
13	Bimbo	2080	Couple	803.5	3%	7186	Abstract art	763	4%	3110	Burned victim	799.5	0%
14	Wal Mart	2080	Babies	911.5	7%	2410	Child	1090	2%	3015	Accident	881	2%
15	Starbucks	8496	Toboggan	823	7%	7920	Auto crash	926.5	3%	3225	Mutilation	859.5	6%
16	Facebook	5833	Beach	851.5	16%	7030	Iron	910	1%	3068	Mutilation	849.5	7%
17	L´Oréal	8501	Money	833	2%	7060	Boat trash	906	1%	3100	Burned victim	786	5%
18	General Electric	2070	Baby	847	2%	2400	Woman	890.5	0%	3010	Mutilation	801.5	1%
19	Nintendo	8170	Sailboat	886	1%	9469	Building	889.5	3%	9183	Dog hurt	885.5	1%
20	Samsung	2550	Couple	855.5	0%	7700	Office	859.5	2%	3191	Battered woman	851	1%
21	Pepsi	2165	Father	818	5%	7595	Traffic	858	1%	3170	Tumor baby	853	1%
22	Apple	1440	Seal	865.5	2%	2101	Man	825	3%	2053	Baby	959	0%
23	Bacardi	1710	Puppy	860	2%	2215	Man	865	2%	2352	Bloody kiss	957	6%
24	Liverpool	5831	Sea gulls	804.5	5%	9260	Hands	871	8%	9075	Hungry boy	941.5	1%
25	Converse	4220	Erotic romance	866.5	2%	2440	Girl neutral	816	1%	3016	Mutilation	908	2%

26	Televisa	4626	Marry	780	9%	9210	Rain	877.5	1%	6313	Terrorist	904	8%
27	Google	1460	Cat	882	2%	2104	Neutral woman	854.5	0%	2141	Deformed face	901.5	2%
28	Toyota	5760	Nature	857.5	4%	7011	Can	827	2%	3059	Mutilation	864.5	4%
29	Corona	8190	Skier	863.5	5%	7040	Crumbs	754.5	2%	3080	Mutilation	864	0%
30	Microsoft	1750	Bunnies	825	1%	2221	Judge	849.5	1%	3001	Beheaded	850.5	0%
	Coca Cola	2050	Baby	794	5%	2230	Sad face	803.5	0%	3005	Open tomb	813.5	2%
					46.66%				21%				27.34%

Exhibit 2

Table 1.10Example of imagesInternationalAffectivePictureSystem(IAPS) withinsertionbrand

POSITIVE

Lang (IAPS) image No. 1440

NEUTRAL

Lang (IAPS) image No. 2101

NEGATIVE

Lang (IAPS) image No. 2053

Insertown branddevelopment