

## **Modelling Consumer Responses to Advertising Slogans through Artificial Neural Networks**

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### **Abstract**

This study aimed to achieve an in-depth understanding of consumers' emotional responses to advertising slogans and their effect on the development of advertising effectiveness. The current study is based on a survey data. An artificial neural network architecture was applied in this research study and designed to find patterns of non-linearity, especially if one is dealing with the human "emotional corridor." A good root mean squared error was achieved when highlighting research results like the critical role of consumers' cognitive appraisals and personal involvement. The result manages the outcome desirability of consumers from the product desirability itself and appeal to an emotion-laden pleasant environment. The results are relevant and meaningful to marketing communication from storytelling to consumer-generated advertising. The multiple feedforward the neural network has also enabled the fuzziness of the judgemental data to be dealt with.

*Key words:* emotion; advertising; advertising slogan; artificial neural networks

*JEL classification:* M3

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### **1. Introduction**

Slogans have been employed extensively as a component in advertising campaigns (Wang et al., 2015). Slogans have a positive influence on their brands and function as carriers of brand equity (Dahlen and Rosengren, 2005; Rosengren and Dahlen, 2006). Overall, a review of the slogan-related research reveals that studies in the area have primarily investigated the effects of brand awareness, issues concerning how to make a slogan memorable (e.g., Dahlen and Rosengren, 2005;

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Kohli et al., 2013), relationships between consumer demographic characteristics (e.g., Dotson and Hyatt, 2000), and slogan learning and assessment (e.g., Dahlen and Rosengren, 2005). It is, however, important to examine the role of emotion in advertising slogans and, particularly, to investigate how consumers' emotional responses to advertising slogans affect advertising effectiveness. This question needs to be addressed with the intention of uncovering the role and nature of emotions elicited by advertising slogans and their effect on the development of advertising effectiveness.

A number of key seminal past studies are directly associated with the core objectives of this particular research project. For example, Andras and Srinivasan (2003) found that advertising is positively and significantly related to company performance. Lin et al. (2013) were able to deduce from their results that consumers' perceived emotional responses can trigger positive feelings. Most advertising with a considerable feeling component involves heavy repetition (Aaker et al., 1986). Advertisements exposing mixed emotions are common, and research on mixed emotions is of growing interest (e.g., Hong and Lee, 2010; Penz and Hogg, 2011). However, research thus far has not fully investigated the effect of mixed emotional responses on ensuing thoughts and behavior. The extant literature suggests that it is possible to feel more than one emotion in response to a particular occurrence (Ruth et al., 2002). It is mostly assumed that a dominant emotion occurs together with other less prominent emotions. One emotion may dominate over another (Williams and Aaker, 2002; Griffin et al., 2002). Researchers from the field of psychology (e.g., Davidson et al., 1990; Schwartz, 1990) have argued that an incident may evoke emotions of mixed intensity, one dominant and several non-dominant, which are firmly embedded in memory in connection with a stimulus representation.

Based on the above, it can be observed that the link between repetitive emotions, mixed emotions, and the dominant emotion has not been established. To address this gap, the present study focuses particularly on examining the dynamic characteristics of the emotional process and the connection among repetitive, mixed, and prevailing emotions. The study argues that consumers' emotional responses to advertising slogans may include repetitive and/or mixed emotions, and their perceptions of emotions may be fuzzy and unclear. However, after lengthening these emotional experiences and reinforcing their emotional states, one dominant emotion will stand out over other emotions. Hence, this study conceptualizes consumers' emotional responses to advertising slogans as a fluid and dynamic "emotional corridor." The "emotional corridor" is defined as a corridor through which emotions, containing repetitive emotions and/or mixed emotional experiences, pass and in which individuals' emotional perceptions are blurred. When the emotional responses are prolonged, the individuals' emotional states will be reinforced and one emotion will become dominant and prevail.

This study is structured as follows. After presenting the theoretical background and hypotheses, the paper describes the research method, artificial neural networks, and then presents results and discussion. Finally, the study ends with a conclusion.

## **2. Theoretical Background and Research Hypotheses**

### **2.1 Previous Research on Slogans**

Bradley and Meeds (2002) pointed out that simple-syntax versions of slogans were beneficial in recognition. Advertising slogans with intermediate syntactic complication had a significantly positive influence on free morphemic recall and attitudes towards the advertisement. Another stream of slogan research examined the effects of “priming.” According to Fiske and Taylor (1984), priming exists when regular and current ideas come to mind with greater ease than ideas that are not currently or regularly activated. In advertising research, priming has been utilized to enhance the effectiveness of information processing and recall (Smith, 1992; Smith and Park, 1992).

Dimofte and Yalch (2007) indicated that individuals were different in their responses to advertising using polysemous slogans, as differences existed in individuals’ ability to access automatically the secondary meanings contained in slogans. Miller et al. (2007) found that motivation, needs, and involvement are significant factors affecting participants’ preferences for certain military recruitment slogans. Kohli et al. (2007) suggestions for designing an effective slogan are: positioning the brand in an apparent way, joining the slogan to the brand, repeating the slogan, using jingles, employing the slogan at the outset, and being innovative with long-term aims. Recently, Kohli et al. (2013) indicated that use of jingles, use of rhymes, and complexity of slogans do not have significant influences on brand recall. Nevertheless, slogans sustained by extensive marketing budgets, retained for a long time, and shorter slogans resulted in better brand recall.

All these works were conducted in Western countries, and positioned from Western viewpoints. Interestingly, the position of emotion in advertising and consumer behaviour literature has changed since the 1980s and has attracted great interest in advertising and consumer-based literature. However, there is no research that models consumers’ emotional responses to slogans and their effects on advertising slogans, leaving the issues untouched and unanswered. Additionally, there is very limited slogan-related research in the advertising literature to be conducted from the Eastern perspective. This research was conducted in an Asian country, Taiwan, and tested the slogans in Mandarin Chinese, which is one of the most widely spoken languages in the world. Understanding consumers in Taiwan can help to understand consumers in China since they use the same language of Mandarin Chinese and share similar culture (Wang and Heitmeyer, 2006).

### **2.2 Cognitive Appraisals**

Researchers have suggested that the cognitive appraisal approach is a promising avenue for studying emotions in consumer behavior contexts (e.g., Bagozzi et al., 1999; Watson and Spence, 2007). Emotion appraisal profiles are generally well validated by both experimental studies (e.g., Neumann, 2000; Smith

and Lazarus, 1993) and correlation studies (e.g., Scherer, 1997). In addition, these profiles are generalizable across numerous cultures (e.g., Scherer, 1997).

Researchers (e.g., Faseur and Geuens, 2006; Martensen et al., 2007) have found a significant relationship between positive emotion and advertising effectiveness. Thus, positive emotions and their associated appraisals will have a significant effect on advertising effectiveness. The following hypotheses relate to cognitive appraisal.

**H1 cognitive appraisals1:** Positive emotions and their associated appraisals have a positive effect on attitudes towards the advertisement.

**H1 cognitive appraisals2:** Positive emotions and their associated appraisals have a positive effect on attitudes towards the brand.

**H1 cognitive appraisals3:** Positive emotions and their associated appraisals have a positive effect on purchase intention.

### **2.3 Product Involvement**

Involvement, specifically product involvement, has been proved a major determinant of consumer behavior and advertising response (e.g., Zaichkowsky, 1985, 1994). Consumers process advertisements more actively, devote more time and cognitive effort to advertisements (Celsi and Olson, 1988), and focus more on product-related information in the advertisements (Celsi and Olson, 1988) when product involvement is high (Petty and Cacioppo, 1981). The following hypothesis relates to product involvement.

**H2 product involvement:** The level of product involvement has a negative relationship with the preference of emotional appeals.

### **2.4 Gender**

Previous studies have revealed gender differences in the information-processing styles, emotions involved in consumption at the time of judgement, and the processing strategy related to memory in the advertising perspectives (Fisher and Dubé, 2005). Gender differences in emotions, personality, and values have been found significant (Guimond et al., 2007). The next hypothesis relates to gender.

**H3 gender:** Gender difference has a significant effect on the consumer's emotional responses to advertising slogans.

### **2.5 Age**

Williams and Drolet (2005) found that age differences influence response to emotional advertisements. In addition, there is considerable evidence to suggest that aging is associated with a reduction in the negativity effect (e.g., Gruhn et al., 2005). The following hypothesis examines age.

**H3** *age*: Age difference has a significant effect on the consumer's emotional responses to advertising slogans.

## **2.6 Emotional Responses**

Important lessons from neuroscience have revealed that emotional and memory systems are dynamic and change momentarily (DuPlessis, 2005; Marci, 2006). Continuous measurements of emotions become essential when theorists conceptualize emotions as fluid processes instead of stable states (Larsen et al., 2004; Scherer, 2009), increasing understanding of both the nature and effect of specific feelings. Scherer (2009) confirmed that emotions are conceptualized as the content of an emergent, dynamic process derived from an individual's subjective appraisal of an important event. The next hypothesis relates to emotional responses.

**H4** *emotional responses*: The greater the repetition of exposure, the higher the variability of consumers' emotional responses.

## **2.7 Attitude towards the Advertisement (Aad)/Attitude towards the Brand (Ab)/ Purchase Intention (PI)**

Over the last two decades, studies have acknowledged that the consumers' emotional responses towards a brand and/or advertisement can greatly motivate consumption behavior (Allen et al., 1992; Haley and Baldinger, 1991). Past research has shown that emotions affect attitudes towards an advertisement (e.g., Derbaix, 1995) and a brand (e.g., Morris et al., 2002). Research has indicated a significant positive relationship between emotional responses and purchase intention (PI) (e.g., Morris et al., 2002). We will examine the following hypotheses.

**H5** *Aad*: Consumers' emotional responses to the advertising slogan have a positive relationship with the likelihood of attitudes towards the advertisement (Aad).

**H6** *Ab*: Consumers' emotional responses to the advertising slogan have a positive relationship with the likelihood of attitudes towards the brand (Ab).

**H7** *PI*: Consumers' emotional responses to an advertising slogan have a positive relationship with the likelihood of purchase intention (PI).

Various studies have shown that attitudes towards advertisements worked as an intervening variable between advertising content and attitudes towards the brand (Ab) (e.g., Holbrook and Batra, 1987; Spears and Singh, 2004). We will examine this in the following hypothesis.

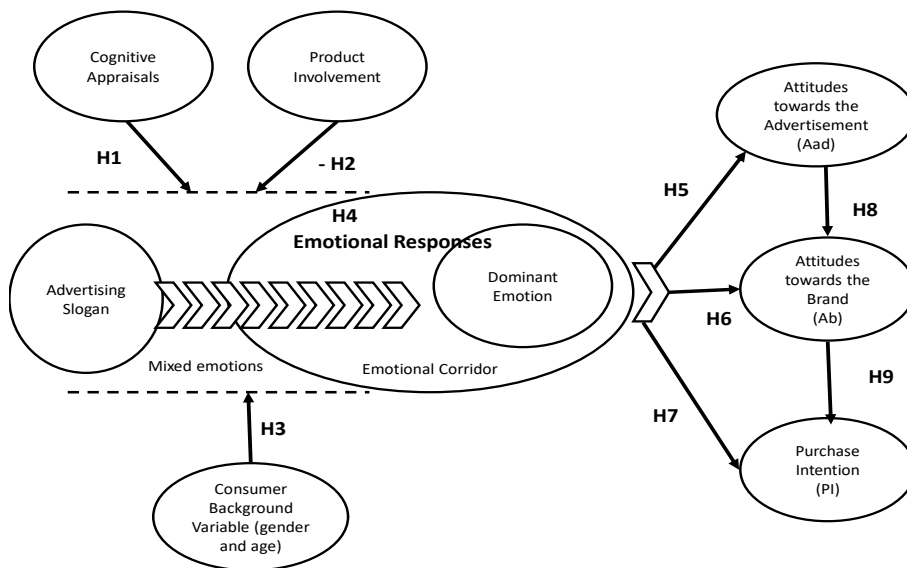
**H8** *Aad & Ab*: Attitudes towards the advertisement (Aad) have a positive effect on attitudes towards the brand (Ab).

Prior studies have indicated a significant positive relationship between brand attitude and PI (e.g., Spears and Singh, 2004). We will test the following hypothesis.

**H9** *Ab & PI*: Attitudes towards the brand (Ab) have a positive effect on purchase intention (PI).

Based on a review of the consumer behavior literature, this research has identified three main constructs—cognitive appraisals, product involvement, and the consumer background variable (gender and age)—which can influence the consumer’s emotional responses, namely the consumer’s emotional corridor. Specifically, the cognitive appraisals approach provides a more detailed and refined way to explain emotions compared to other approaches. Product involvement has been proved as a key determinant of consumer behavior and advertising response. Demographic variables, particularly gender and age, have been proved to significantly affect the consumer’s emotional responses. This research identifies other factors that may affect consumers’ emotional responses to advertising slogans. Hence, it concentrates on the aforementioned variables. Figure 1 presents the conceptual model underpinning the research.

**Figure 1. The Conceptual Research Model**



**3. Research Method**

**3.1 Selected Advertising Slogans**

Two advertising slogans (McDonald’s: McDonald’s is all for you! and KFC: All in KFC is delicious!) were chosen because they belong to world-renowned and long-established brands that are familiar to Taiwanese consumers. With the intention

to investigate the consumer's emotional corridor, "three-hit-theory" and "projective sentence completion techniques" were chosen. In particular, participants were first required to say each slogan aloud three times. Each time after saying the slogan aloud, they were asked to report their perceptions of emotions. In other words, the slogan was embedded in three phrases that the participants had to repeat, thus prolonging their emotions. Subsequently, participants were asked to identify their dominant emotion in relation to the slogan. This was intended to obtain the participant's dominant emotion to the advertising slogan. In general, most respondents did not appear to have any difficulty in responding to the questionnaires.

### **3.2 Procedure and Sample**

In East Asia, a marketing style called the "night market" has been very successful (Wu and Luan, 2007). For many people, night markets are an important part of their culture, and in Taiwan they play an essential role in daily life (Barnett, 2000). According to a report of the Ministry of Transportation and Communications Tourism Bureau (2010), night markets take the first place as a domestic tourist site. They can contribute more than 10 billion New Taiwan dollars a year, and the Feng Chia night market, being a famous night market in Taiwan is a good example. On weekday evenings, generally 30,000 to 40,000 shoppers visit the Feng Chia night market, while at the weekends or on holidays the number can increase to 100,000 shoppers (website <http://www.go2taiwan.net>). Thus, this survey research was conducted in the Feng Chia night market with the aim of approaching various consumers (Malhotra, 1996).

This study used a systematic sampling technique, whereby the researcher invited every tenth shopper who passed the data collection points to participate in the study. It is expected that the disadvantages caused by the use of the night market can be compensated for by employing the probability sampling technique. The survey was conducted over a period of three weeks that included weekdays and weekend days in order to avoid respondent bias. The sample comprised 220 shoppers. Of those, 187 provided questionnaires that were considered usable (85% useable rate); 52% of respondents were female and 48% of respondents were males. The age of the majority of respondents was concentrated in the 18-to-29 year-old group (75%). This was followed by those in the 30-to-39 year-old group (20%), and then those in the group aged 40-to-49 (5%).

### **3.3 Research Instrument**

Given the lack of well-established measures of cognitive appraisals especially designed for advertising slogans, this study had to develop a questionnaire containing such measures. Additionally, the study proposed the construct of the consumer's emotional corridor. Hence, the qualitative approach was conducted, aiming to confirm cognitive appraisals used by consumers in respect of advertising slogans, and to validate the research model. The snowballing technique was adopted to recruit participants for the semi-structured interviewees. Out of 12 participants,

five were female and seven were male. Their average age was 38 (ranging from 20 to 52). The interviews lasted for 30 minutes and were tape-recorded, transcribed, and double-coded. Content analysis was applied to analyze the data. Overall, drawing on the insights from the analysis of the semi-structured interviews, this qualitative interview reconfirmed the preliminary conceptual framework that was developed for this study. For the survey questionnaire, the appraisals proposed by Ortony et al. (1988), the Revised Personal Involvement Inventory (RPII) proposed by Zaichkowsky (1994) to measure involvement, the measure of attitude towards the advertisement (Aad) and attitudes towards the brand (Ab) proposed by Holbrook and Batra (1987), and the measure of purchase intention (PI) proposed by Spears and Singh (2004), were used due to their suitability, reliability, and validity. All items were measured on a five-point Likert scale (1=strongly disagree, 5=strongly agree).

**Table 1. Evaluation of McDonald's and KFC Cognitive Appraisal Factors**

No	Items	McDonald's (KMO: 0.823)				KFC (KMO: 0.832)		
		Factor 1 Value and Certainty	Factor 2 Novelty	Factor 3 Outcome Desirability	Factor 4 Self- Agency	Communalities	Factor 1 Outcome Desirability	Factor 2 Novelty
1	pleasant feelings			0.804	0.692	0.696		0.585
2	enjoyable feelings			0.766	0.613	0.648		0.578
3	attractiveness			0.699	0.609	0.755		0.592
4	appeal			0.659	0.654	0.734		0.568
5	desirability			0.706	0.692	0.784		0.702
6	expectancy			0.687	0.653	0.787		0.685
7	worth	0.803			0.662	0.810		0.697
8	value	0.823			0.703	0.805		0.764
9	reliability	0.853			0.740	0.799		0.666
10	trustworthiness	0.860			0.742	0.802		0.681
11	freshness		0.950		0.909		0.915	0.855
12	novelty		0.945		0.904		0.931	0.874
13	other agency			0.596	0.657			0.715
14	self-agency				0.843	0.728		0.648
<b>Eigenvalues</b>		5.88	1.749	1.272	1.057	6.536	1.618	1.049
<b>Cumulated variance explained %</b>				71.127%			65.737%	
<b>Percentage of variance explained</b>		41.999	12.493	9.086	7.549	46.686	11.560	7.491

Notes: Only factor loadings of at least 0.4 are presented.

This research applied principal component analysis with oblique rotation to condense the information obtained regarding cognitive appraisals of the tested advertising slogans. Oblique rotation allows for some correlation between factors.



According to Hutcheson and Moutinho (2008), it is unlikely that influences in nature are not correlated. Even if the influences are not correlated in the population, they might be in the sample. Hence, oblique rotation could yield important and meaningful factors. For the cognitive appraisals data, four factors were extracted from the McDonald’s version and three factors were extracted from the KFC version of the questionnaire (Table 1).

In addition, a one-factor solution, based on a minimum eigenvalue of 1, appeared suitable for attitudes towards the advertisement, attitudes towards the brand, and purchase intention measures across the two cases (Table 2).

The researcher conducted principal factor analysis and Cronbach’s alpha analysis (and Pearson analysis if applicable) to test the reliability and validity of all adopted scales and extracted factors (see Appendix 1 and 2). The results revealed that all scales are unidimensional and reliable.

**Table 2. Factor Solutions of Attitudes towards the Advertisement, Attitudes towards the Brand, and Purchase Intention of McDonald’s and KFC**

No	Items	McDonald’s		KFC	
		Factor loading	Communalities	Factor loading	Communalities
<b>Attitudes towards the advertisement</b>		KMO: 0.764		KMO: 0.725	
1	like	0.818	0.669	0.846	0.709
2	react favorably	0.766	0.586	0.787	0.619
3	feel positive	0.715	0.512	0.736	0.542
4	feel good	0.849	0.721	0.744	0.553
<b>Eigenvalues</b>		2.488		2.423	
<b>Percentage of variance explained</b>		62.197		60.576	
<b>Attitudes towards the brand</b>		KMO: 0.606		KMO: 0.645	
1	like more	0.797	0.636	0.804	0.646
2	feel more positive	0.741	0.55	0.793	0.629
3	feel better	0.825	0.68	0.796	0.633
4	feel more favorable	0.67	0.448	0.697	0.486
<b>Eigenvalues</b>		2.314		2.357	
<b>Percentage of variance explained</b>		57.85		58.914	
<b>Purchase intention</b>		KMO: 0.849		KMO: 0.866	
1	have intention to buy	0.881	0.777	0.885	0.782
2	intend to buy	0.911	0.829	0.892	0.795
3	have high purchase interest	0.838	0.702	0.867	0.751
4	will buy	0.891	0.793	0.892	0.795
5	probably buy	0.823	0.678	0.826	0.683
<b>Eigenvalues</b>		3.78		3.941	
<b>Percentage of variance explained</b>		75.591		78.823	

#### 4. Artificial Neural Networks

The origin of the artificial neural network (ANN) approach is rooted in physiology and psychology, the aim being to work with a direct analogy of the human brain as a set of interconnected processing units also called nodes or neurons

operating in parallel. A neuron executes two operations on the receiving values; the first, called “combination function,” consists of summing its inputs weighted by the correspondent links of the neuron. The second, called “activation function,” applies a function to the value obtained in the former operation and produces the output of the neuron. The activation function can be classified into three groups: threshold, piecewise-linear, and sigmoid (S-shaped) functions. In this study we use the sigmoid function because it is by far the most common form of activation function used in the construction of a neural network (Haykin, 2008). In particular, this function has the ability to find patterns of non-linearity which other traditional statistical methods, such as multiple regression analysis, cannot model (DeTienne et al., 2003).

The most common architecture within the realm of ANNs is feedforward networks (Phillips et al., 2002; Gan et al., 2005; Gronholdt and Martensen, 2005; Cardoso et al., 2008). In Phillips et al. (2001), the revision of neural networks application in marketing problems clearly confirms that feedforward networks outperform other statistical and optimization methods. Concerning the training of this kind of computer modelling approach, the backpropagation (BP) algorithm is the preferred supervised learning rule. The literature corroborates that several ANN applications were developed using this technique (Goode et al., 2005; Bloom, 2005; Khan et al., 2011).

However, slow convergence and long training times can be observed when dealing with complex problems. Consequently, to overcome these difficulties, several techniques are proposed in order to increase its speed of convergence as well as the capacity of generalization of the resultant network. Lopes and Ribeiro (2003) developed a new neural network topology called multiple feedforward (MFF) network and a new gradient-based algorithm: multiple backpropagation (MBP); for details, see Lopes and Ribeiro (2003).

#### **4.1 The Use of Artificial Neural Networks to Model Consumer Behavior**

ANNs have been successfully applied in a broad range of domains, including classification, data mining, optimization, and time series prediction. Since the mid-1990s, they have also been applied to marketing problems, such as modelling consumer responses to market stimuli (Curry and Moutinho, 1993), predicting consumer choice (West et al., 1997), new product development (Thieme et al., 2000), marketing strategy (Li, 2000), market segmentation (Boone and Roehm, 2002), analyzing customer satisfaction and loyalty (Gronholdt and Martensen, 2005), and modelling the effect of market orientation on firm performance (Silva et al., 2009). As researchers realize the flexibility of this methodology and its usefulness in a wide range of research areas, the number of applications of ANN increased. Researchers have highlighted their performance in other marketing problems, including consumer behavior.

Note that our aim is to analyze the factors influencing consumers' purchase intention regarding McDonald's and KFC and, furthermore, we don't know the connection type between the explanatory variables and the output, purchase intention. Unlike the neural network approach, which does not need explicit a priori

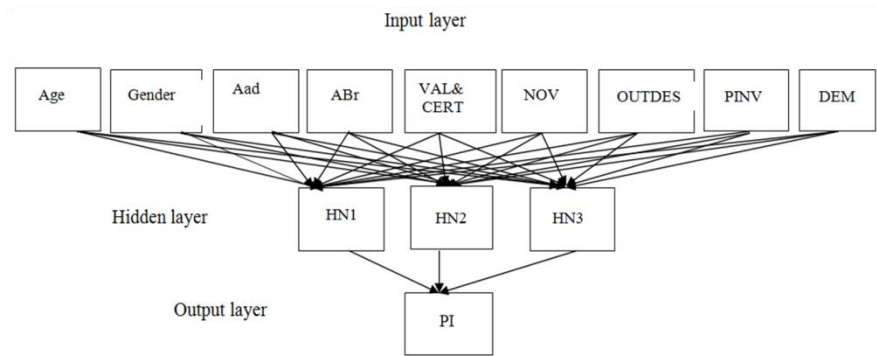
relationships between input and output variables because the network develops an internal relationship between the variables, structural equation modeling (SEM) requires that the researcher think in terms of investigation models: a structural (a set of structural equations, i.e., simultaneous regression equations) and measurement models, which must be specified and identified to carry out the analysis. Besides, with the first technique, the assumptions of regression were not necessary. So, considering the goal of our study, the unknown relationships between dependent and independent variables, and the requirements of SEM, NNs were more attractive.

#### 4.2 Neural Network Approach

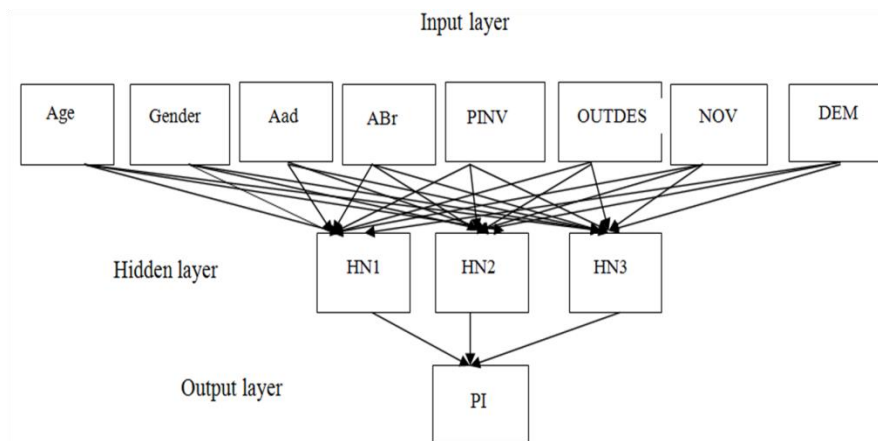
Given the purpose of our study, the analysis of the factors influencing consumers' purchase intention regarding McDonald's and KFC and the comparison of their attitudes when considering the advertising of these fast food restaurant chains through the proposed research construct—the consumer's emotional corridor—a neural network model was used. It was decided to employ this statistical approach for several reasons. Firstly, the input data was judgemental rather than factual, so there was some “fuzziness” in the data, the numbers used in the analysis being indicators of feelings or perceptions rather than exact observed values. It was more important to look for overall patterns in the data than to try to formulate equations relating inputs to output. Secondly, one advantage of this methodology is its ability to serve as a “universal approximator” (Hornik et al., 1989) and to allow the labelling of hidden layer nodes (Davies et al., 1996)—so clusters of factors contributing to each hidden node could be examined to see whether they reveal an underlying management philosophy which would impact either positively or negatively on purchase intention.

Each of the data sets representing the cases McDonald's and KFC comprised 187 examples, which were divided into a training set of 150 examples (80% of the sample) and a test set of 37 examples to validate the model. The presentation of the training patterns was in online mode and random. Several neural network architectures, including MFF were developed and trained with the supervised learning rule MBP. It was found that the optimal fit between inputs and outputs was achieved with a feedforward network with a single hidden layer of three neurons. This was thought to be a reasonable number of intermediate variables that could be identified and labelled, and increasing the number of hidden neurons beyond three did not improve predictions in any network topology, nor was there any advantage in increasing the number of hidden layers. The activation function used for the hidden and output neurons was the sigmoid function.

Regarding the McDonald's data set, the neural network had nine input nodes, corresponding to the following explanatory variables: Age, Gender, Attitude towards the advertisement (Aad), Attitude towards the brand (Abr), cognitive appraisal Value & certainty (VAL&CERT), cognitive appraisal Novelty (NOV), cognitive appraisal Outcome desirability (OUTDES), Product involvement (PINV), and Dominant emotion (DE). The single output neuron corresponded to Purchase intention (PI). Figure 2 shows this neural network architecture.

**Figure 2. Neural Network Used for the Analysis of Purchase Intention towards Mcdonald's**

The network for the KFC data had eight input nodes, corresponding to the following explanatory variables: Age, Gender, Attitude towards the advertisement (Aad), Attitude towards the brand (ABr), Product involvement (PINV), cognitive appraisal Outcome desirability (OUTDES), cognitive appraisal Novelty (NOV), and Dominant emotion (DE). The output neuron also corresponded to Purchase intention (PI). Figure 3 illustrates this neural network architecture.

**Figure 3. Neural Network Used for the Analysis of Purchase Intention towards KFC**

In both cases (McDonald's and KFC), different training configurations were tested with the MBP algorithm. Indeed, this supervised learning rule makes a great diversity of training settings available: namely, an adaptive learning rate and a momentum term (Lopes and Ribeiro, 2003). In this framework, these parameters were initialized to 0.4 and 0.01, respectively, decaying the latter, automatically, 1% after each 500 epochs for McDonald's and 1,000 epochs for KFC. Different random initializations for the weights were also tested. The interval  $[-1, 1]$  was considered to provide better results regarding the error function.

**5. Results and Discussion**

**5.1 Analysis of the McDonald’s Findings**

Table 3 shows the weights of the network connections between the nodes and the contributions made by the input variables. The contributory and inhibitory weights were within a range of [-1.9, 2.5]. The root mean squared error (RMSE) obtained for the test data was 0.055. To evaluate the performance of the FF network, a goodness-of-fit coefficient  $R^2 = 0.42$  was computed for purchase intention. Consequently, the neural model explains around 87% of the variance of the output variable. The values and signs (+ or -) of the network connection weights between the input nodes and the hidden neurons are used to infer suitable intermediate attributes with which to label the hidden neurons. Moutinho et al. (1996) asserted that this labelling has some element of subjectivity, but this is true of many causation models that attempt to explain attitudes or behavior in terms of latent variables (e.g., LISREL).

Observing the resulting neural network topology derived from the findings of the study, we found that the cognitive appraisal Outcome desirability has the highest total contribution of 5.46 to the three neurons comprising the hidden layer. The second highest total contribution derives from Age (2.46). The third most significant total contribution is Product involvement (2.16). Attitude towards the brand, Attitude towards the advertisement, and the two cognitive appraisals, Value & certainty and Novelty, had similar contributions of 1.75, 1.54, 1.34, and 1.17, respectively, while Dominant emotion (0.82) and Gender (0.59) had the lowest levels of impact on the hidden layer neurons.

**Table 3. Neural Network Weights between Input Nodes and Hidden Neurons**

To hidden layer	Age	Gender	Attit_adv	Attit_br	Value & Certainty	Novelty	Out. Des.	Prod. Involv	Dom. emotion
1st neuron	0.655	0.243	-1.038	-0.218	-0.799	0.179	1.284	-1.908	0.171
2nd neuron	-0.144	0.050	-0.451	1.264	-0.347	0.492	2.454	0.183	0.240
3rd neuron	1.661	0.301	-0.051	-0.263	-0.19	-0.503	-1.724	0.067	-0.413
Total Contribution	2.46	0.594	1.54	1.745	1.336	1.174	5.462	2.158	0.824

Based on the analytical overview of the different roles played by input nodes concerning their level of impact on the hidden layer, we can deduce the following labelling structure for the three hidden neurons. The input factors loading on hidden neuron one (HN1) represent low Attitude development towards both the advertisement (-1.04) and the brand (-0.22), low perceived Value (-0.80) behind the claim, an almost “detached” level of Product involvement (-1.91) as well as no apparent striking Dominant emotion (+0.17). Still there is a glimpse of desire towards a certain level of surprise and Novelty (+0.18) to be embedded in the advertisement and specially, a clear level of Outcome desirability (+1.28) to be

rendered beyond the advertising campaign. Therefore we have labelled this hidden neuron as “Advertising Inertia and Expectations Delivered.”

Looking at the structure and flow of impacts regarding inhibitory and contributory weights stemming from the input factors onto the hidden layer, we can infer that, in reality, there are only two major conceptual forces moulding HN2. One, and once more, is related to the expressed desire by consumers to attain and obtain a tangible outcome (+2.45) related to their purchase intentions. The second one is concerned with a more favorable and positive attitude towards the brand (+1.26). This attitudinal dyad represents a complementarity in the minds of consumers, who in fact want brands to deliver their promises and even go beyond desired expectations in the messages encapsulated by a particular slogan or advertising campaign. Consumers’ “zones of tolerance” (the difference between adequate and desired expectations) are shrinking and becoming smaller. In light of these analytical observations, we have labelled HN2 as “Brand Authenticity and Not Brand Dressing.”

HN3 is totally dominated by the paramount effect of age (+1.66). Since slightly over 70% of the sample respondents were under the age of 29, we can assume that younger consumers are much more prone to trigger emotional responses related to advertising slogans. Moreover, this sample represents a strong fabric of Chinese culture—more compliant, more gregarious, more others-oriented, less individualistic, more generous—as examples of these cultural traits which predispose them to have a more “accepting” attitude towards advertising slogans and also a higher level of believability, since in most cases in Asia, there are less superfluous messages leading to unmet expectations. This contrasts with the much more rebellious attitude of the “Skip Forward,” “Y,” and “Millennial” generations of Western countries. We thus labelled HN3 as “Youth Brand Engagement” (Table 4).

**Table 4. The Impacts of the Hidden Neurons on Purchase Intention**

From hidden layer			
To output layer	1st neuron (Advertising Inertia and Expectations Delivered)	2nd neuron (Brand Authenticity and Not Brand Dressing)	3rd neuron (Youth Brand Engagement)
Purchase Intention	-2.657	2.572	1.712

With regard to the impacts derived from the three hidden neurons onto the only output factor purchase intention (Table 5), the following conclusions can be drawn. The only negative impact on purchase intention is clearly derived from the node labelled “Advertising Inertia and Expectations Delivered.” This factor illustrates and reinforces the make-up of HN1 but continues to emphasise the advertising inertia component, more than the expectations represented by the “umbrella” slogan and copy body of the messages, and actually fulfill consumers’ expectations. The highest level of impact derived from the hidden layer onto the output factor is represented by HN2—“Brand Authenticity and Not Brand Dressing.” This result is consistent

with the findings derived from HN1 in as much as consumers want a clear emotional correlation between the brand promise and the advertising slogan. More and more consumers are disregarding empty promises, fancy words, and hype in advertising.

Finally, another important element shaping consumers' purchase intention is related to HN3, represented here by the "Youth Brand Engagement." This means that despite the results expressed by HN1 and HN2, younger people are more inclined to display emotional attitude, perceptions, and reasoning, which can elevate their relationship with brands and even prompt them to become much more engaged with brands and their commercial stimuli.

### 5.2 Analysis of the KFC Findings

Table 5 depicts the weights of the network links between the neurons as well as the contributions made by the input variables. The contributory and inhibitory weights were within a range of [-4.9, 6.5] and the final RMSE obtained for the test data was 0.065. To evaluate the performance of the FF network, a goodness-of-fit coefficient  $R^2 = 0.64$  was computed for purchase intention. The overall contribution of the input variables in the model reveals that Product involvement (13.49) and the cognitive appraisal Novelty (9.06) have the two highest total contributions to the three neurons comprising the hidden layer, followed by Attitude towards the advertisement (5.427). Gender, Dominant emotion, and Attitude towards the brand also have meaningful contributions of 3.92, 3.14, and 3.07, respectively, as well as the explanatory variable Outcome desirability (2.46). The lowest level of impact on the hidden layer derives from the first input factor, Age, with a total contribution of 0.44.

**Table 5. Neural Network Weights between Input Nodes and Hidden Neurons**

From Input layer

To the hidden layer	Age	Gender	Attit_adv.	Attit_br	Prod_Involv.	Out_Des	Novelty	Dom. emotion
1 <sup>st</sup> neuron	-0.263	-1.982	-0.994	-1.691	6.486	0.734	-4.133	2.071
2 <sup>nd</sup> neuron	-0.141	-1.904	-4.368	0.629	6.296	-1.104	-4.748	1.023
3 <sup>rd</sup> neuron	0.036	0.034	0.065	0.705	0.705	0.618	0.175	-0.045
Total Contribution	0.44	3.92	5.427	3.07	13.487	2.456	9.056	3.139

Regarding the results of the ANN topology extracted for KFC, we can present the following findings and reasoning. In terms of the input factors and their impact on the hidden layer, we can detect higher contributions, as expressive weights compared to McDonald's. Still, the topology here reveals different underlying meanings. HN1 is impacted in a negative way by Gender (-1.98) and above all by the facet of cognitive appraisal Novelty (-4.13) and Attitude towards the brand (-1.69). This hidden neuron is significantly and positively dominated by Product involvement (+6.49) (the highest weight) and also Dominant emotion (+2.07), a continuum between happiness and unhappiness. This means that consumers are

much more involved with the product itself (chicken-based food) than with the brand-building element. Moreover, they feel that there is a lack of innovation, surprise, and constant upgrading of the product mix. These circumstances can explain the movement between the anchors of happiness and unhappiness in the perceptions' continuum. As a result of this intertwining of weights, HN1 is hereby labelled as "Product Essence."

HN2 exhibits a plethora of negative weights stemming from Gender (-1.90) again, Attitude towards advertisement (-4.37), cognitive appraisal Novelty (-4.75), as well as Outcome desirability (-1.10). The same pattern found in HN1 regarding Product involvement (+6.30) can be found in this case. Nevertheless, the Dominant emotion here leans towards a more "timid" level of happiness-unhappiness. Taking into account these results, one can attribute a meaning and a consequent label to this hidden node that revolve around the presence of a more vague emotional change. HN2 is therefore called "Hybrid Product Essence."

HN3 is showing a different pattern from the other hidden nodes in the sense that its weights are less salient and more "flat" in terms of their degrees of impact. The only relevant weights (positive) worth mentioning are the Attitude towards the brand (+0.75), Product involvement (+0.71), cognitive appraisal Outcome desirability (+0.62), as well as Novelty (+0.18) to a certain extent. Looking at this pattern, we have decided to label HN3 as a "More of the Same Consumer Attitude."

**Table 6. The Impacts of the Hidden Neurons on Purchase Intention**

From hidden layer			
To output layer	1 <sup>st</sup> neuron (Product Essence)	2 <sup>nd</sup> Neuron (Hybrid Product Essence)	3 <sup>rd</sup> neuron (More of the Same Consumer Attitude)
Purchase Intention	6.546	-5.579	8.103

With regard to the impacts of the three hidden nodes onto the output factor, depicted in Table 6, we can detect that both HN1 ("Product Essence") and HN3 ("More of the Same Consumer Attitude") have high positive weights affecting purchase intention, in particular, the last one with a weight of 8.10. This means that the lever of the "Product Essence" as defined by the product category of the food itself and the normal development of more traditional consumer attitudes, are key determinants of the formation of purchase intention. Interestingly, a less committed attitude to the product category normally has a negative effect on purchase intention. This inhibitory weight, HN2 ("Hybrid Product Essence") is actually quite substantial in its impact on intention to buy the branded product.

### 5.3 Discussion

As noted earlier, the cognitive appraisal Outcome desirability variable includes determinants such as pleasantness, appeal, desirability, and expectancy features (Table 1). The findings suggest that the more consumers evaluate the McDonalds' slogan as pleasant, appealing, desirable, and expectable, the more likely it is that



they will have favorable attitudes towards the purchase intention. Cognitive appraisal theorists believe that emotions are elicited from a subjective appraisal of the circumstances, and that it is not the actual situation that produces emotions but the psychological appraisal (Lazarus, 1991), and cognitive appraisals are believed to be interpretations of situations relating to the possible influence on one's well-being (Bagozzi et al., 1999). Therefore, when the participants perceive that slogans are reaching their goals and outcome desirability, they have a favorable attitude towards the purchase intention of McDonald's. This finding supports previous researchers' findings (e.g., Bagozzi et al., 1999; Johnson and Stewart, 2005; Watson and Spence, 2007) that the outcome desirability refers to the initiatory cognitive appraisal of whether the outcome of circumstances is good or bad regarding personal well-being. This is commonly agreed to be the main critical appraisal of stimuli.

Regarding the KFC case, consumers care more about the product itself. The findings mainly suggest that when consumers perceive the product quality positively, they have a favorable attitude towards the purchase intention of KFC. This finding supports previous researchers' findings (e.g., Jalilvand et al., 2011; Ashton et al., 2010) that indicate that product-perceived quality has a significant impact on consumers' intention to purchase products.

Looking at the neural network topology—input factors, hidden nodes, and output factor—as well as the myriad of all the contributing and inhibitory weights, one can reach the following conclusions regarding the acceptability of the studied research questions. With regard to H1 *cognitive appraisals1*, it can be said that positive emotions and their associated appraisals do not always have a positive impact on attitudes towards advertising. H1 *cognitive appraisals2* is based on the same formulation and premise but in this case focusing on the brand itself. The results point for the marginal acceptance of this research question based on key contributions from two of the hidden nodes. Therefore, one can accept that positive emotions and their associated appraisals do have a positive relationship with the formation of brand attitudes. The same can be said for H1 *cognitive appraisals3* based on the same reasoning and contributions from two of the hidden nodes. Therefore, positive emotions and their associated appraisals do have also an impact on purchase intention.

With regard to H2 *product involvement*, and looking at the findings derived from the ANN topology, we will have to accept that the level of personal involvement has a direct relationship with the preference for certain emotional appeals. Concerning H3 *age* and *gender*, we have found that age and gender differences do not significantly affect consumers' emotional responses to advertising slogans. In the case of the variable age, the topology shows paths that have low representative weights. H4 *emotional responses* cannot also be accepted due to the dominance of two hidden nodes—advertising inertia and brand authenticity. Therefore, greater repetition exposure does not mean higher variability of consumers' emotional responses.

With regard to H5 *Aad*, the study is also indicating a rejection of this premise. Consumers' emotional responses to advertising slogans do not have a

straightforward positive relationship with the likelihood of developing an attitude towards the advertisement, despite the countervailing force derived from the positive roles of the dominant emotion and the outcome desirability. On the other hand, and based on the same exact premise, there is a likelihood of an impact on the brand. Therefore, we will have to accept H6 *Ab* that states that consumers' emotional responses to advertising slogans have a positive relationship with the likelihood of attitude development towards the brand. We will also have to accept H7 *PI* which states that emotional responses to advertising slogans have a positive relationship with the likelihood of occurrence of a purchase intention. This research question acceptance is mainly based on the revealed hidden nodes related to brand engagement and brand authenticity.

H8 *Aad & Ab* will have to be rejected based on the findings of the study. Attitudes towards advertising do not necessarily affect the triggering and formation of attitudes towards the brand. Finally, we will also have to reject H9 *Ab & PI* on the basis of the analysis of the ANN topology. Attitudes towards the brand do not necessarily affect purchase intention, although in this case there were some mixed contributions which makes this decision not as clear-cut as in the case of H8.

The findings of the study clearly suggest that consumers are increasingly searching for the expected fulfilment of desired expectations. They are looking for tangible value. In fact, underlying these results we can also find traces that fast-food consumers are also seeking values beyond the value of the product and service itself. These values can be related to a continuum that ranges from animal welfare in terms of cattle grazing to the protection of the physical environment-solid waste and disposal of packaging to the issue of workers' low wage packages and human welfare and health issues like obesity.

The importance of product involvement is evident in the results but it can be seen as an almost level of "detached involvement." Probably and most likely the true involvement will appear with the satisfaction of current and future expected needs and wants associated with some of the human values aforementioned.

It is interesting to note that our results portray a case of "gendered consumption," as well as the the important finding that substantiates our premise and new construct of the "emotional corridor." Consumers are displaying and securing less and less visible strong emotions but, on the contrary, a plethora of mixed, uneven, and jagged exhibited human emotions. It is also affirmed that consumers are increasingly disregarding "empty promises"-based advertising slogans and totally nonsense messages and being increasing savvy about commercial realism; they do not appreciate the numerous vain promises that are, still and unfortunately, prevailing in the traditional marketing and advertising paradigm. It was interesting to find that young millennials are more prone to the activation of emotional triggers. Tangible examples of these findings and trends and relating them to the two studied commercial fast-food chains, one can see that, although product involvement is a salient feature with KFC and, therefore, more susceptible to the formation of a dominant emotion, the nature of these particular emotions are clearly less inspired and more undistinguished emotions. McDonald's circulates in a

consumer zone of “more pleasantness” feelings, attitudes and emotions, which then consequently lead to a higher level of product involvement.

## **6. Conclusions**

### **6.1 Research Contribution**

The main contribution of this research study lies in the exploration of the critical facets and underpinnings that comprise the fundamental process of cognitive appraisal performed by consumers, in this particular case related to short (halo effect/oversimplifications in human minds) advertising messages (“umbrella” slogans). Consumer emotional responses towards advertising are becoming more multidimensional, nonlinear, and chaotic. This is why we have developed a new construct called the “emotional corridor” which has been tested and validated here by using an artificial neural networks topology. Another critical contributory role of this research revolves around the finding of the importance attached to the construal “outcome desirability” which proved to be essential in the consumers’ decision-making—a process entailing the notion that the choice and purchase values sought by consumers are projected well beyond the traditional unmet expectations and vain positioning promises delivered by advertising claims.

Additionally, the consumer’s “emotional corridor” construct, which appears to be more advantageous for measuring consumers’ emotional responses to advertising slogans compared to previous researchers’ suggestions for overall assessments of continuous measures. For example, some researchers (e.g., Polsfuss and Hess, 1991) calculated the mean score across the advertisement as a measure of overall advertisement. The identical or similar mean could be generated by a flat affect pattern and affect curves with positive or negative slopes, although respondents may not assess them identically (Hughes, 1992). The peak-and-end rule (e.g., Larsen and Fredrickson, 1999) is not suitable either, as this study focused on modeling the consumers’ emotional responses to advertising slogans. The peak-and-end rule has two main points of emotional states. It is difficult to decide which should be modeled as an explanatory variable. Identifying positive and negative changes (e.g., Thorson, 1991) or indicating the end (e.g., Aaker et al., 1986) as a sign of overall evaluation is also challenging. These studies have been criticized because of a lack of systematic explanation of what affect patterns consumers prefer in advertisements (Baumgartner et al., 1997). Accordingly, this research argues that the consumer’s emotional corridor construct provides insights into consumers’ emotional responses to advertising slogans that are more rational.

What then, are the main conclusions that can be extracted from these two studies? Personal involvement can be a substantial factor in both cases, but interestingly, this involvement is much more visible at the brand level in the case of McDonald’s as compared to the product category level, which is more noticeable when dealing with the KFC offerings. Consumers’ cognitive appraisal is also highly relevant in both cases, but more related to the desirability of a particular outcome (a

pleasant total experience) in the case of McDonald's, as opposed to the issue of novelty and "product renewal" in the case of KFC. Purchase intention towards McDonald's is much more influenced by age (younger age cohorts) than in KFC's case. Gender plays a more determinant role in KFC's situation than in McDonald's. As one would expect, the attitudes towards the McDonald's brand are much more salient than in the case of KFC. Interestingly enough, the attitudes towards corporate advertising are very similar in both cases and highly relevant. The novelty factor is also important in both cases but slightly more predominant in the realm of KFC's business system. The consumers' cognition related to "Value & Certainty" is much more striking and highly important when related to the McDonald's brand. Dominant human emotions play a much more prominent role in the case of KFC, which can be seen as a somewhat surprising finding. Despite the fact that the attitudes towards advertising are a highly influential factor, there is a degree of "advertising inertia" (consumers being somewhat blasé) in the case of McDonald's. Nonetheless, expectations are expected to be delivered. This reinforces the fact that McDonald's customers clearly seek "brand authenticity" and avoid any type of brand exaggeration, brand build-up, or "brand dressing." Finally, KFC's customers are more likely to experience a higher range of "oscillations" between the "happiness" and "unhappiness" mental states, demonstrating, therefore, a more vague degree of emotional charge.

## **6.2 Managerial Implications and Recommendations**

With regard to McDonald's, the most critical managerial implications of this study's results are related to the role of advertising and copy strategies. Consumers are becoming much more savvy, knowledgeable, and discerning, and they clearly know what lies behind a brand. Therefore, they really wish that messages portrayed in advertising are clearly linked to relevance and fit solutions sought by consumers. This does not imply that advertising should be dull and boring. But, if one combines relevance, meaning, and fulfilled expectations with creativity, imagination, and surprise, an unbeatable advertising formula will ensue. These results also confirm that purchase intention is patently driven by relevance and usefulness as opposed to decadent promotional positioning of the past. We are talking about advertising with meaning, consumer-generated advertising, and co-creation of messages (content-casting) as key drivers of the future of marketing communication. Furthermore, the message must rely less and less on traditional media planning and much more on (consumer) experience planning.

On the other hand, the key managerial implications that can be derived from the analysis of the ANN topology associated with the KFC data set are quite different from those assigned to McDonald's. Consumers here are less keen on or involved with the brand reputation element itself and much more attached to the product category as a raw catalyst leading to preference and purchase. This fact highlights the variance in the perceptual movement in terms of consumer happiness/unhappiness. Habituation and habit persistence are also visible in this topological assessment. Purchase intention is therefore much more likely if the

quality and variety of the product lines are positively perceived by consumers. Much less effort can be placed on marketing “noise” or brand “hyper-ventilation.”

Some key recommendations that can be made with regard to McDonald’s are centered on the roles of advertising and copy strategies. These must revolve around the need for portraying relevance, meaning, and fulfilled expectations. The company can increase its usage of customer storytelling and consumer generated advertising and well as pioneering the shift from traditional media planning to a new philosophy of “experience planning” focused on consumers’ experience with the product mix. Concerning the case of KFC, the recommendations are different. Product involvement and brand reputation are not as salient in this case. More emphasis should be placed on the management of product categories (e.g., quality and variety). The company should really monitor the perceptual movements and oscillations of the “happiness” pendulum. KFC should also capitalize on habituation and habit persistence which are associated with its customer base and rely less on brand-building programs.

Specifically, this study chose the advertising slogans of two well-known brands. However, it could not be avoided that the participants might already have their own opinions about the brands and/or slogans before filling out the questionnaires; this may influence the results to a certain extent and produce bias. Further research would be thus advised to employ fictitious advertising slogans which are entirely new to participants with the aim of reducing bias in this aspect. Furthermore, only one version of advertising slogan was used for each brand, whereas in fact the tested brands might use various advertising slogans in their advertisements. Individuals’ emotional reactions to other slogans within the same brand might be distinguishably different from each other. Therefore, this represents another issue that future research could usefully address.

**Appendix 1. McDonald's and KFC Cognitive Appraisal Factors Scale of Reliability Analysis & Pearson Correlation**

Notes: \*\* and \* indicate two-tailed significance at the 1% and 5% levels, respectively.

McDonald's				
	Corrected Item-to-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's	Pearson Correlation
<b>Value &amp; worth</b>	0.676	0.848	0.868	1
value	0.713	0.834		0.774** 1
reliability	0.742	0.822		0.510** 0.536** 1
trustworthiness	0.747	0.82		0.506** 0.545** 0.866** 1
<b>Outcome Desirability</b>			0.858	
pleasant feelings	0.708	0.817		1
enjoyable feelings	0.623	0.829		0.725** 1
attractiveness	0.673	0.821		0.529** 0.392** 1
appeal	0.66	0.822		0.559** 0.417** 0.688** 1
desirability	0.734	0.812		0.552** 0.514** 0.626** 0.571** 1
expectancy	0.709	0.814		0.500** 0.480** 0.574** 0.576** 0.762** 1
other agency	0.262	0.885		0.267** 0.283** 0.169* 0.136 0.185* 0.228** 1
	<b>Mean</b>	<b>Std. Deviation</b>		
<b>Novelty</b>				
freshness	3.24	0.837		1
novelty	3.21	0.857		0.821** 1
KFC				
<b>Outcome Desirability</b>			0.904	
pleasant feelings	0.665	0.917		1
enjoyable feelings	0.631	0.919		0.773** 1
attractiveness	0.692	0.915		0.474** 0.468** 1
appeal	0.677	0.916		0.445** 0.518** 0.688** 1
desirability	0.740	0.912		0.539** 0.479** 0.474** 0.490** 1
expectancy	0.726	0.913		0.504** 0.477** 0.477** 0.500** 0.810** 1
worth	0.772	0.911		0.513** 0.494** 0.559** 0.549** 0.632** 0.622** 1
value	0.773	0.911		0.473** 0.472** 0.574** 0.535** 0.651** 0.601** 0.849** 1
reliability	0.690	0.915		0.455** 0.411** 0.552** 0.467** 0.531** 0.515** 0.561** 0.578** 1
trustworthiness	0.693	0.915		0.455** 0.369** 0.570** 0.529** 0.500** 0.503** 0.550** 0.575** 0.799** 1
	<b>Mean</b>	<b>Std. Deviation</b>		
<b>Novelty</b>				
freshness	3.23	1.097		1
novelty	3.25	1.097		0.868** 1
<b>Agency</b>				
other agency	3.53	1.058		1
self-agency	3.09	0.964		0.140 1

**Appendix 2. McDonald's and KFC Attitudes towards the Advertisement, Attitudes towards the Brand and Purchase Intention Scale of Reliability Analysis & Pearson Correlation**

	McDonald's <sup>⊖</sup>			
	Corrected Item-to-Total Correlation <sup>⊖</sup>	Cronbach's Alpha if Item Deleted <sup>⊖</sup>	Cronbach's a <sup>⊖</sup>	Pearson Correlation <sup>⊖</sup>
<b>Attitudes towards the advertisement</b> <sup>⊖</sup>			0.797 <sup>⊖</sup>	
like <sup>⊖</sup>	0.643 <sup>⊖</sup>	0.728 <sup>⊖</sup>		1 <sup>⊖</sup>
react favourably <sup>⊖</sup>	0.580 <sup>⊖</sup>	0.759 <sup>⊖</sup>		0.501** 1 <sup>⊖</sup>
feel positive <sup>⊖</sup>	0.521 <sup>⊖</sup>	0.786 <sup>⊖</sup>		0.389** 0.423** 1 <sup>⊖</sup>
feel good <sup>⊖</sup>	0.692 <sup>⊖</sup>	0.703 <sup>⊖</sup>		0.646** 0.503** 0.489** 1 <sup>⊖</sup>
<b>Attitudes towards the brand</b> <sup>⊖</sup>			0.755 <sup>⊖</sup>	
like more <sup>⊖</sup>	0.584 <sup>⊖</sup>	0.679 <sup>⊖</sup>		1 <sup>⊖</sup>
feel more positive <sup>⊖</sup>	0.538 <sup>⊖</sup>	0.704 <sup>⊖</sup>		0.328** 1 <sup>⊖</sup>
feel better <sup>⊖</sup>	0.624 <sup>⊖</sup>	0.657 <sup>⊖</sup>		0.687** 0.466** 1 <sup>⊖</sup>
feel more favourable <sup>⊖</sup>	0.462 <sup>⊖</sup>	0.745 <sup>⊖</sup>		0.355** 0.489** 0.283** 1 <sup>⊖</sup>
<b>Purchase intention</b> <sup>⊖</sup>			0.916 <sup>⊖</sup>	
have intention to buy <sup>⊖</sup>	0.804 <sup>⊖</sup>	0.894 <sup>⊖</sup>		1 <sup>⊖</sup>
intend to buy <sup>⊖</sup>	0.856 <sup>⊖</sup>	0.883 <sup>⊖</sup>		0.785** 1 <sup>⊖</sup>
have high purchase interest <sup>⊖</sup>	0.750 <sup>⊖</sup>	0.909 <sup>⊖</sup>		0.633** 0.783** 1 <sup>⊖</sup>
will buy <sup>⊖</sup>	0.820 <sup>⊖</sup>	0.892 <sup>⊖</sup>		0.708** 0.747** 0.685** 1 <sup>⊖</sup>
probably buy <sup>⊖</sup>	0.722 <sup>⊖</sup>	0.910 <sup>⊖</sup>		0.696** 0.629** 0.544** 0.726** 1 <sup>⊖</sup>
			KFC <sup>⊖</sup>	
<b>Attitudes towards the advertisement</b> <sup>⊖</sup>			0.781 <sup>⊖</sup>	
like <sup>⊖</sup>	0.678 <sup>⊖</sup>	0.678 <sup>⊖</sup>		1 <sup>⊖</sup>
react favourably <sup>⊖</sup>	0.592 <sup>⊖</sup>	0.725 <sup>⊖</sup>		0.601** 1 <sup>⊖</sup>
feel positive <sup>⊖</sup>	0.538 <sup>⊖</sup>	0.752 <sup>⊖</sup>		0.434** 0.466** 1 <sup>⊖</sup>
feel good <sup>⊖</sup>	0.547 <sup>⊖</sup>	0.751 <sup>⊖</sup>		0.545** 0.365** 0.424** 1 <sup>⊖</sup>
<b>Attitudes towards the brand</b> <sup>⊖</sup>			0.773 <sup>⊖</sup>	
like more <sup>⊖</sup>	0.607 <sup>⊖</sup>	0.702 <sup>⊖</sup>		1 <sup>⊖</sup>
feel more positive <sup>⊖</sup>	0.615 <sup>⊖</sup>	0.701 <sup>⊖</sup>		0.440** 1 <sup>⊖</sup>
feel better <sup>⊖</sup>	0.609 <sup>⊖</sup>	0.701 <sup>⊖</sup>		0.711** 0.406** 1 <sup>⊖</sup>
feel more favourable <sup>⊖</sup>	0.482 <sup>⊖</sup>	0.767 <sup>⊖</sup>		0.296** 0.615** 0.309** 1 <sup>⊖</sup>
<b>Purchase intention</b> <sup>⊖</sup>			0.921 <sup>⊖</sup>	
have intention to buy <sup>⊖</sup>	0.812 <sup>⊖</sup>	0.900 <sup>⊖</sup>		1 <sup>⊖</sup>
intend to buy <sup>⊖</sup>	0.824 <sup>⊖</sup>	0.897 <sup>⊖</sup>		0.772** 1 <sup>⊖</sup>
have high purchase interest <sup>⊖</sup>	0.787 <sup>⊖</sup>	0.905 <sup>⊖</sup>		0.689** 0.778** 1 <sup>⊖</sup>
will buy <sup>⊖</sup>	0.824 <sup>⊖</sup>	0.897 <sup>⊖</sup>		0.739** 0.701** 0.707** 1 <sup>⊖</sup>
probably buy <sup>⊖</sup>	0.733 <sup>⊖</sup>	0.915 <sup>⊖</sup>		0.651** 0.630** 0.603** 0.739** 1 <sup>⊖</sup>

Notes: \*\* and \* indicate two-tailed significance at the 1% and 5% levels, respectively.

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