

Print Advertising and Female Sensuality in a North African Context: The Mediating Role of Visual Mental Imagery

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Abstract

This paper investigates the mediating role of mental imagery in ads using female sensuality approach. It aims to study the relationships between congruence, provocation, mental imagery and attitude toward advertisement. Before completing the main survey, 77 subjects were instructed to rate a series of 16 female models. Only the highest and the lowest in perceived intensity of sensual appeals were selected. Two print advertisements, sensual female model vs. non sensual female model, were designed using Photoshop software. The study was then conducted nearby 200 participants aged between 18 and 35 in Tunisia. Results indicate that high congruency between sensual model and product leads to minimize viewer's irritation, raise mental images quantity and provoke the appearance of vivid positive mental imagery. The latter variable has a mediating role in the formation of attitude toward advertisement, it contribute to achieve a favourable attitude toward advertisement.

Keywords: Female Sensuality, Provocation, Congruence, Mental Imagery, Attitude toward Advertisement.

Introduction

Researchers and practitioners are increasingly interested in the role of provocative images in advertising (Vézina and Paul 1997; De Pelsmacker and Van Den Bergh 1996, Gallopel and Petr 2000; Pope et al. 2004). Several studies show that provocation is powerful to overcome consumer saturation and it allows reaching out in a cluttered media environment (Vézina and Paul 1997). Pope et al. (2004) define provocative advertising as 'a deliberate attempt to gain attention through shock'. It alludes to and encompasses several concepts already studied or currently being studied in the field of marketing. The use of sexual appeals is the basis of the provocative side of an advertisement. That does not simply mean nudity or sexual behavior, but has a much broader meaning. Reichert (2003) distinguish five types of sexual images in advertising; Nudity, Sexual Behavior, Physical Attractiveness, Sexual Referents and Sexual Embeds. Much of the discussion regarding the impact of suggestive sexual connotations in advertising has focused on moral and ethic issues (Hunt and Scott 1986; Richins 1991; Bloch and Richins 1992; Key, in Gould 1994; Thompson and Hirshman 1995), rather than the effectiveness of such techniques. The use of sexual stimuli in advertising has the increased likelihood to affect persuasion (Reichert et al. 2001).

This research focuses on the efficiency of stimuli with a sensual character (Soley and Kurzbard 1986; Soley and Reid 1988; LaTour et al. 1990; Dichter 1990; Pirron and Young 1996; Hoyers and MacInnis 1997; Wells et al. 1998; Lambiase et al. 1999; Reichert 2003). It underlines the impact of the congruence between the female model and the product. It demonstrates also the provocation's effect on the creation of visual mental imagery, through female body's sensuality.

1. Sex Content In Advertising: The Use Of Female Sensuality

Sex is becoming increasingly popular as an image and persuasive appeal in advertising (Driessen 2005). The preponderance of sexual appeals seems to be driven by their ability to garner consumer attention (Putrevu 2008). Despite the ethical dilemma emanating from such use (Joannis 1995), nowadays, it is not unusual to find provocatively posed and attired (or unattired) models (men/women) promoting products in general-interest consumer magazines (Henthorne and LaTour 1995). Sex appeal can be found in visual, audio, and verbal elements in advertising (Gould 1992). It has two kinds of levels: illustrations containing nudes (high level) and those with suggestive sexual connotations (low levels). Some ads contain overt sexual images, with models engaged in erotic scene. Some others use the sensual approach, with a hint of sexual suggestion (Reichert 2003). It is less concrete than nudity, and includes a menagerie of stimuli. The sensuality is *the ability to enjoy pleasures of the senses*. It 'is a way to live life with the senses fully aware of the pleasurable aspects of nature, the human body, joy and interactions with others' (Bodeeb 2011). A sensual ad is a message having or possessing sexual stimuli that triggers or arouses sensual pleasures in a person's mind. The references to sex are implied or subtle (Reichert 2002). Contrary to the sexual approach, which is synonymous of high degree of nudity, the sensual one uses either the partial nudity or the suggestiveness. Commercials representing the sexually-suggestive female category include ads with female models dressed in a sexual manner or behaving seductively (Solomon et al. 1992).

Suggestiveness has been operationalized several ways in the literature (Weller et al. 1979; Richmond and Hartman 1982; Reichert and Ramirez 2000). It is 'an appeal that links the product to imaginative wish fulfillment, implicitly promising fantasy gratification of sexual motives' (Tinkham and Reid 1988, p.118). Richmond and Hartman (1982) labeled suggestive stimuli as "fantasy" and measured it on a 6-point scale item anchored by "romantic/ordinary". Fantasy ads might contain sensual or romantic images. They may appeal to the consumer's desire for romance or fulfillment of sexual fantasies. A suggestive commercial uses sexual referents and sexual embeds. Sexual referents are message elements (verbal and/or visual) that serve to elicit or educe sexual thoughts (Reichert 2003). They include allusions and references to objects and events that have sexual meanings (Richmond and Hatman 1982; Bello et al. 1983). Often referred to as subliminal advertising, sexual embeds are defined as 'referents or forms of sexual representation designed to be perceived subconsciously' (Theus, in Reichert and Lambiase 2008, p.25).

Reichert and Ramirez (2000) identify four characteristics of sexy ads: physical features of models, behavior features, contextual features and the proxemics.

1.1 Physical Features

It encompasses three categories of responses; references to clothing, general attractiveness, and physique (Peterson and Kerin 1977; Reidenbach and McCleary 1983; Simpson et al. 1996). This category refers to model's body or clothing. Advertisers place more emphasis on the physical attributes of the models. They use fully-clothed models that are sexually inviting (Reichert, 2003) or partially clad or nude ones (LaTour 1990; LaTour and Henthorne 1993). Nudity is typically referred to as 'the depiction of bare bodies, including silhouettes, and models in translucent undergarments' (Pope et al. 2004, p.69). It is operationalized as the amount and style of clothing worn by models in ads, as models in various stages of undress going from suggestive to partially-revealing to nude (Steadman 1969; Peterson and Kerin 1977; Weller, Roberts and Neuhaus 1979; Belch et al. 1981; Judd and Alexander 1983; Jones et al. 1998; Simpson et al. 1996; Putrevu 2008). Full nudity in advertising is often represented by implied nudity or side shots.

1.2 Behavior Features

According to Reichert and Ramirez (2000) they include characteristics of ads that focus on model's behavior (provocative and flirting gestures such as inviting smiles, movements), features such the models posture such as "provocative", "sassiness", "fun-loving" as well as the voices heard in the ad (singing, moans and groans).

1.3 Contextual Features

This category refers to the different aspects of the commercial other than models such as photographic effects, sounds other than human voices, lighting effects and setting (Reichert and Ramirez 2000). The related factors to the context undoubtedly participate to create sexual perceptions, but in a less significant and uniform way than the physical category of the sensual contents (Reichert and Ramirez 2000).

1.4 Proxemics

References to proxemics involve any mention of physical distance or relative interaction between the models. The sexual interactions could represent decent portrayals (holding hands) or more intimate forms of sexual behavior (kissing, embracing, implied suggestion of intercourse).

2. Female Sensuality, A Source Of Provocation

The provocation is defined as ‘a deliberate appeal, within the content of an advertisement, to stimuli that are expected to shock at least a portion of the audience, both because they are associated with values, norms or taboos that are habitually not challenged or transgressed in advertising, and because of their distinctiveness and ambiguity’ (Vézina and Paul 1997, p.179). Provocation is an intangible element of the ad measurable by degree. Although it constitutes a tool of provocation, the sensuality does not show out the same level of provocation as the other sexual creative artifices such as nudity or sexual verbal content (Ben Amor 2005). Provocative and sexual appeals are different. The sexual appeals are a subset of provocative appeals when used in a context that has little or nothing to do with the product advertised. Provocative appeals include sexual appeals and other execution strategies such as fear, humor, warmth, irritation and political or racial issues (Vézina and Paul 1994). Congruence is a factor in consumers' responses to provocative advertising (Pope et al. 2004). Vézina and Paul (1997) demonstrate that linked nudity–product congruence may not only have an effect on how much the advertisement is liked/disliked but also, how provocative the advertisement is (the less congruence the more provocative). In literature, a variety of terms have been used such as congruency, fit, link, “match up effect”, connection.

The Congruence is defined as ‘the appropriateness of the ad execution for the product/ brand (e.g., relevance of the sexual appeal to the target brand, sexuality/product congruence) (Putrevu 2008). According to Heckler and Childers (1992), congruency has a two dimensional structure: relevancy congruence reflects the ‘extent to which the information contained in the stimulus contributes to or prevents a clear identification of the main theme or message being communicated’ and Expectancy congruence refers to ‘the degree to which an item or piece of information fits into a predetermined pattern or structure evoked by this theme’ (Fleck-Dousteyssier and Korchia, 2006, p.7). The interaction effects of product type and advertisement type (provocation level) explains the consumer’s emotional and behavioral responses to ads. Apparently, consumers are willing to accept, and even prefer the ad when the product and sexual stimuli appear logically connected, but not when the provocative stimulus is irrelevant to the product (Peterson and Kerin, in De Barnier et al. 2004). ‘Sexual messages that have no apparent connection to the product may seem distasteful even to liberals’ (Gunter, in Hetsroni, 2007, p.202).

Several studies have also found that the product type involved in advertisements emphasizing gender difference or nudity has an effect on viewer response, and much of this seems related to congruity. A female model for advertisements related to body oil, for example, is more appropriate than other products (Peterson and Kerin 1977). The fact that female sensuality is perceived as sex in advertising is directly affected by the perceived congruence between the female model and the product. This type of sexual contents causes a reaction of rejection or acceptance, according to the degree of provocation (Tissier-Desbordes and Manceau 2003). There is thus a direct relation between this congruence and provocation. Congruence is a factor in consumers' responses to provocative advertising (Pope et al. 2004; Reichert et al. 2001). Sex in advertising is accepted if it is congruent with the product. If the product is incongruent with nudity then it is perceived as provocation and the advert may be even less effective in creating a positive response (Peterson and Kerin in De Barnier et al. 2004).

Product /sensual stimulus congruence allow a better understanding of the degree of felt provocation and its consequences on the emotional and behavioral answers of consumers. Where consumers perceive a clear link between the product advertised and the nude image, they are more likely to interpret the advertisement favorably. Besides if there is no congruence between the product and the use of sexual stimuli provocative advertising is perceived as a deliberate attempt to gain attention through shock (Pope et al. 2004; Tissier-Desbordes and Manceau 2003).

As a consequence, they will feel more provocation and their answers will be even more unfavorable (Peterson and Kerin in De Barnier et al. 2004). As the level of provocation increases, the intended communication effects either turn negative or dissipate (La Tour et al. 1990). The congruence has an effect on viewer response toward provocative ads (Pope et al. 2004). The sensual illustrations of the female models can be appreciated all the more as the congruence between the stimulus and the product increases (Peterson and Kerin 1977; Belch et al. 1987; Richmond and Hartman 1982; Pope et al. 2004).

H1: Product-female model congruence has a negative effect on provocation.

3. Female Sensuality, A Source Of Mental Imagery

3.1 Mental Imagery

The study of the effects of mental imagery has received widespread interest in consumer behavior and advertising literature (Rossiter and Percy 1980; Edell and Staelin 1983; Childers et al. 1985; Gavard-Perret (1987, 1991); Miller and Marks 1992; Burns et al. 1993; Englis et al., 1993; Oliver et al. 1993; Scott 1994 ; Helme-Guizon (1996) ; Babin and Burns 1997; Lallement 1999; Chamard 2000 ; Branthwaite 2002; Gavard-Perret and Helme-Guizon 2003; Schlosser 2003; Gallen 2005). Mental imagery has been defined as, (1) a ‘mental event involving visualization of a concept or relationship’ (Lutz and Lutz 1978, p.611), (2) a ‘process whereby sensory information can be represented in working memory’ (Miller and Marks 1992, p.83). It is (3) ‘a mode of cognition involving the activation of perceptual knowledge stored in the long-term memory’ (Miller et al. 2000, p.1)

Imagery has been conceptualized in terms of the presence of specific production features of advertisements believed to evoke imagery processing (MacInnis and Price 1987). The latter includes multi-sensory dimensions; it can be visual, auditory, olfactory, gustatory or tactile (Kim and Lennon 2008; Bourne et al. in Gavard-Perret and Helme-Guizon 2003; Intonns-Panderson; Winnick and Brody; Tracy et al. in Charmed 2000; Burns et al. 1993; Helme-Guizon 1998). Imagery is often viewed as a multidimensional (Miller et al. 2000). Helme-Guizon (1997) suggested that imagery may vary in terms of quantity (number of images evoked), vividness (intensity), clarity (distinctiveness of images), affective tone or valence (positive or negative), elaboration works (connections between images and other information in memory) and Self-relatedness (links experienced from the message).

Although mental imagery is experienced across the whole range of perceptual modalities, for the present research purposes it will be sufficient to concentrate on the visual modality. According to the dual coding model, visual and verbal information are processed differently pictures are encoded as imaginal codes and words are represented as verbal codes (Paivio 1971; Unnava and Burnkrant 1991). Paivio (1971) defines mental visual imagery as a “memory code or associative mediator that provides spatially parallel information that mediates overt responses without necessarily being consciously experienced as a visual image”. It represents a useful way to shape consumers' impressions (Burns et al. 1993). It involves the use of visual, somatic and verbal information to transport an individual into behavioral situations (Goossens 1994).

3.2 Antecedents Of Imagery Processing

Visual information led to more changes in beliefs about the product and thus created more positive attitudes and purchase intentions than verbal information (Alesandrini and Sheikh 1983; Childers and Houston 1984; Lutz and Lutz 1977; Paivio 1971). The picture superiority effect is generally attributed to the mental imagery elicited by visual stimuli (Paivio 1969, Lutz and Lutz (1977, 1978); Gavard-Perret 1987; Rossiter and Percy; Gavard-Perret; in Alesandrini and Sheikh, 1983). When a person encounters a visual stimulus like a picture, an imaginal code is activated, whereas the verbal code will be activated when the person encounters a verbal stimulus like text (Kim and Lennon 2008). Several studies have reported that generating imagery by increasing the salience of print advertisement pictures relative to copy can enhance the recall of information presented in the advertisements (Miller et al. 2000). Pictorial elements, such as the use of attractive models, can influence a variety of advertising outcomes. However, most print ads are designed so that visual and verbal elements interact to produce the overall message (Nylen in Areni and Cox 1994).

Consumer's experience and involvement in a product category may also interact with the imagery processing to affect purchase satisfaction. Higher involvement with a product is thought to lead to more elaboration and deeper processing of an ad (MacInnis and Price 1987). To eliminate any effects from participants' previous experiences with the brand, a fictitious name and a product associated with a low degree of purchaser involvement were used in this study.

3.2.1 The Relation between Congruence and Mental Imagery

The congruence affects the dimensions of mental imagery (Helme-Guizon 1998). A congruent stimulus arouses positive mental images especially when advertising possesses a positive signification (Kiselius and Sthernthal 1984) and if it corresponds to a consumer's expectations (McQuarie and Mick 1992). Contrarily, non congruent stimulus provokes the appearance of negative mental images (Heckler and Childers 1992).

H2.1: Product-female model congruence has a positive effect on the valence dimension of the mental imagery.

An iconic advertising stimulus perceived as congruent involves a more positive visual imagery and globally less elaborated, than a non congruent stimulus (Helme-Guizon 1998). A congruent stimulus includes psychological elements shared by the transmitter and the receiver. It generates thus stereotyped mental images. Contrary, the non congruent stimulus causes the formation of idiosyncrasic images. A visual advertising executive is adequate if it's similar to the images in memory associated with the product, with the nature of visual or with its contents (Helme-Guizon 1998). So, in front of a non congruent stimulus, the individual provides a personal interpretation. It is the cognitive development that releases to reduce the gap between waiting and perception and to look for a possible sense to the non perceived congruence (Heckler and Childers 1992). Nevertheless, the consumer can sometimes choose to quit all cognitive effort by laziness. In this case, he refers himself on an advertising execution element to construct some mental pictures (Scott 1994).

H2.2: Product-female model congruence has a negative effect on the elaboration dimension of the mental imagery.

Contrary to the previous studies that confirm the impact of the congruence on the quantity of pictures produced, Helme-Guizon (1998) finds this impact no meaningful. It can be explained by the stimuli's nature used by researchers. An attractive stimulus such as the female sensuality generates more mental images (Miniard et al. 1991).

H 2.3: Product-female model congruence has a positive effect on the quantity dimension of the mental imagery.

A congruent iconic stimulus with the product advertised stimulates the formation of vivacious visual imagery. This vividness is bigger with the increase of the congruence discerned (Miller and Marks 1992).

H2.4: Product-female model congruence has a positive impact on the vividness dimension of the mental imagery.

3.2.2 The Relation between Provocation and Mental Imagery

An iconic attractive stimulus, especially a provocative one, is able to activate several processes (Howard and Shandh in Pop et al. 2004) encouraging an imaginative aesthetical experience (McQuarrie and Mick 1992) leading thus to a mental images generation. In the case of a weak implication, this stimulating power is reinforced and the advertising persuasion is strongly affected by the peripheral way which is mainly the mental imagery (Miniard et al. 1991; Gavard-Perrand and Helme-Guizon 2003). The suggestive character of the sensual advertisement evokes sexual representations in the consumer's mind (Reid et al. 1984). It is through the provocation that they lead to an increasing probability of message's recall. The storage in memory facilitates in the first place the association between the suggestive images and the product and in second place the possibility to conceive a mental imagery.

The interest provoked by the sensual announcements is the basis of the mental imagery's role of such as process by which the sensory information is represented in a working memory (Lutz and Lutz (1977, 1978); Childers and Houston 1984; Smith et al. 1984; Childers et al. 1985; MacInnis and Price 1987). Thus, more the degree of provocation increases, more the advertisement attracts the attention, has the probability to be memorized and to be a mental imagery source.

H3: Provocation has a positive effect on mental imagery.

4. Mental Imagery And Persuasion

Mental imagery is of interest to advertising researchers because it has been shown to influence several cognitive and affective responses to advertising messages (Shepard in Rossiter and Percy 1980; Gavard-Perret and Helme-Guizon 2003). Research shows that the different dimensions of the imagery have a positive influence on attitudinal responses (Bone and Ellen 1992; Anderson; Carrol in Oliver et al. 1993; Anderson; Gregory et al.; McGill and Anand in Babin and Burns 1998; Burns et al. 1993; Miller and Marks 1992). The nature of the relation between imagery-Eliciting Strategies and attitude toward the ad, however, was found to be mediated by the dimensions of mental imagery.

The vividness of the mental imagery has a significant and positive effect on the attitude toward the advertising (Bone and Ellen 1992; Babin and Burns 1998; Miller and Marks 1997; Burns et al. 1993). It plays a mediating role between provocation and the attitude to the advertising (Babin and Burns 1997; Babin and Burns 1998).

H4.1: The vividness has a positive effect on the attitude toward the advertising.

H4.2: The vividness mediates the relation between provocation and the attitude toward the ad.

Elaboration dimension of mental imagery has a significant and positive impact on the attitude toward the advertising (Babin in Babin and Burn 1998; Babin and Burns 1997; Babin et Burns 1998). It is a mediating variable in the development of attitudes (Babin in Babin and Burns 1998).

H4.3: Elaboration has a positive effect on the attitude toward the advertising.

H4.4: Elaboration mediates the relation between provocation and the attitude toward the ad.

The researchers find that quantity dimension of mental imagery possesses a positive effect on the attitude toward the advertising and that it plays a mediating role in the advertising persuasion (Bone and Ellen 1992; Miller and Marks 1992).

H4.5: The quantity has a positive effect on the attitude toward the advertising.

H4.6: The quantity mediates the relation between provocation and the attitude toward the ad.

The valence dimension of mental imagery has a positive impact on the attitude to the communication (Kisielius and Sternthal in Oliver et al. 1993; Miller and Marks 1992; Helme-Guizon 1998). It is a mediating variable between the characteristics of the announcement and the attitude to the advertising (Helme-Guizon 1998).

H4.7: The valence has a positive effect on the attitude toward the advertising.

H4.8: The valence mediates the relation between provocation and the attitude toward the ad.

5. Research Methodology

5.1 Stimuli Design

Print advertisement was used giving their capacity to generate visual mental imagery (Babin and Burns 1997). The product selected for this experiment by 131 students was mineral water. The product had to be for both women and men (Dudley 1999) and should be associated with a low degree of purchaser involvement so that respondents are attentive to the visual components of the commercial advertisement (Mitchell and Olson in Mitchell 1986). A fictitious name, "Mineralis", was selected by 30 persons from a list of 10 brand names among which 5 fictitious. It was presented as a possible new brand of mineral water in order not to present confounds due to existing memory for actual one. The brand name which was selected is the one possessing the lowest notoriety and global evaluation (Lallement 2001).

Before completing the main survey a pilot study was conducted to determine the level of sex appeals used in various print advertisements. 77 subjects were instructed to rate a series of 16 female models and only the highest and the lowest in perceived intensity of sensual appeals were selected. Two prints advertisements were designed with Photoshop software (Sensual female model / non sensual female model). Stimuli were exclusively iconic, without any verbal information. The ad illustrates only the product and the female model.

5.2 Sampling and Data Collection Procedure

The investigation was held in various regions of Tunisia. A convenience sampling was conducted in this research. The survey statistic sample is made of 200 participants between 18 and 35 years old. Data was collected through questionnaire survey. In order to determine the reliability of the research, a pilot study amongst 20 participants was undertaken to minimize the research error by testing the reliability of questionnaire.

5.3 Data Analysis

The reliability and the validity of the measures were verified in two steps: A descriptive analysis (*SPSS*) and a first order confirmatory analysis (*Amos*). The evaluation of the relationships variables was done by using regression models. The analysis of the mediator effect of the provocation was done by a regression method (Baron and Kenny 1986).

5.4 Measure

Congruence: Product- female model congruence is measured by the Lombardot scale (2007). This tool designed for the study of product-female nudity congruence is the most adapted for the study of female sensuality.

Its development respects the conceptual approach of the bi-dimensionality of the congruence (Heckler and Childers 1992) adopted in this research.

Provocation: It was measured using the one-dimensional Likert scale developed by De Pelsmacker and Van Den Bergh (1996) composed of fourteen items.

Imagery measure: The ad-evoked mental imagery was measured using the scale developed by Babin and Burn (1998) inspired by Ellen and Bone scale (1991). This scale is designed to measure imagery along three dimensions: vividness, quantity and elaboration. It was composed of fourteen 7-point Likert-type items ranging from strongly agree (7) to strongly disagree (1); 8 items measured vividness of evoked mental imagery, 3 items for quantity, and 3 items for elaboration of that imagery. For the purpose of the study we included the valence dimension (1item). According to the research of Helme-Guizon (1998), this one will integrate besides three dimensions proposed by Babin and Burns (1998, 1997), fourth one representing valence (pleasant or unpleasant character of the imagery). The visual modality of mental imagery is studied in this research.

Attitude toward the Advertising: We adopted a measure of attitude toward the ad from Holbrook and Batra (1987) composed of four items.

6. Results Analysis

6.1 Scales' dimensionality and reliability

The reliability of this research was measured using the Cronbach's alpha coefficient which indicates the level of internal items consistency. The consistency of alphas was ranged from 0,722 to 0,875; thus, the scales used for this study were considered to be reliable (Murphy and Davidshofer; Nunnally; Davis; in Peterson 1994).

Congruence: The factor analysis extracted only one factor. Only five items were kept: Photography was suitable for the product advertised, Product was well represented by photography, Photography was be well chosen compared with the product, Photography choice was pertinent compared with the product, It's could be normal to use this photography for this product. Their loadings were all above 0.6. This variable is one-dimensional. The Cronbach's alpha value was 0.875.

Provocation: The factor analysis extracted two factors. Six items had a factorial weight above 0.6. Four items were associated to the first factor (scandalous, in very poor state, gives a bad example, and annoying) labelled as the irritation aspect of provocation. Two items were loaded on the second factor (include sexual connotation and daring), which was entitled sensuality aspect of provocation. The Cronbach's alpha of the two dimensions confirmed the reliability of the scale (0.782 for the "irritating" dimension and 0.722 for the "sensual" dimension).

Mental imagery: The factor analysis highlighted four dimensions. Quantity (factor1): I imagined a number of things and many images came to my mind. Elaboration (factor2): I imagined what it would be like to use the product advertised, and I imagined the feel of the product. Clarity (factor3): clear, detailed, weak, fuzzy and vague. Vividness / valence (Facteur4): vivid, sharp, well-defined and pleasant. Cronbach's alphas were 0.790 for the Quantity dimension, 0.830 for the Elaboration dimension, 0,831 for the Clarity dimension and 0,832 for the Valence/Vividness dimension. The dispersion of items associated with vividness and valence dimensions was non-conform to the literature, what led to a change in the meaning and in fine of the naming of these two dimensions. Valence item was loaded with a part of vividness items. The vividness dimension was subdivided into vividness / valence and clarity.

Attitude toward the advertisement: The factor analysis confirmed the existence of one dimension of the attitude toward the advertisement. The Cronbach's alpha value was 0.848. The four items of the original scale were kept: likable/unlikable, favorable/unfavorable, pleasant/unpleasant, good/bad.

6.2 Confirmatory factor analysis

Reliability was verified by Jöreskog's Rhô, its accepted value is 0,7 or above for a construct (Fornell et Larcker 1981; Didellon and Valette-Florence 1996). All of the rho values range from 0.768 to 0.960. The weights of all the items are higher than 0.5 and the Critical Ratio (CR) associated to each factorial contribution is above 1.96 as recommended by (Lavoisier 2000). Convergent validity was assessed by calculating the Rhô of convergent validity (pvc) which accepted value is 0,50 or above for a construct (Fornell and Larcker 1981).

Discriminant Validity was tested by verifying that the average variance extracted (pvc) by each construct was greater than the squared structural link between all other constructs (Fornell and Larker 1981; Evard et al. 1997). The discriminant validity was performed.

7. Finding

7.1 Impact of congruence on provocation

The relation between congruence female model/ product and provocation is significant (Sig.F is lower than 0,05). The two regression models are globally significant. Congruence acts differently on the two provocation's dimensions. It has a negative impact on irritation ($B\hat{e}ta = -0,219$; $T = -3,162$; $Sig.T = 0,002$) and a positive one on sensuality ($B\hat{e}ta = 0,225$; $T = 3,352$; $Sig.T = 0,001$). *H1 is thus partially accepted.*

7.2 Impact of congruence on mental imagery

The research ends in a factorial structure of the mental imaging does not allow verifying the hypotheses relative to both dimensions of vividness and valence of the mental imagery. Congruence has a positive effect on quantity ($B\hat{e}ta = 0,222$; $T = 3,206$; $Sig.T = 0,002$) and Vividness/valence imagery's dimensions ($B\hat{e}ta = 0,428$; $T = 6,661$; $Sig.T = 0,000$). However, it has no effect on clarity ($Sig.T = 0,925$) and elaboration ($Sig.T = 0,106$). *H2.1, H2.2 and H2.4 are rejected and H2.3 is accepted.*

7.3 Impact of provocation on mental imagery

Irritation aspect of provocation has a negative effect on elaboration ($B\hat{e}ta = -0,180$; $T = -2,583$; $Sig.T = 0,011$), vividness/valence ($B\hat{e}ta = -0,311$; $T = -4,627$; $Sig.T = 0,000$) and clarity ($B\hat{e}ta = -0,162$; $T = -2,379$; $Sig.T = 0,018$). However, it has no effect on quantity ($Sig.T = 0,831 > 0,05$). Besides, sensual aspect of provocation has a positive impact on quantity ($B\hat{e}ta = 0,234$; $T = 3,383$; $Sig.T = 0,001$) and a negative impact on clarity ($B\hat{e}ta = -0,250$; $T = -3,670$; $Sig.T = 0,000$), but no effect on elaboration ($Sig.T = 0,130 > 0,05$) and on vividness/valence ($Sig.T = 0,058$). *H3 is partially approved.*

7.4 Impact of mental imagery on attitude toward the advertisement

Except clarity ($Sig.T = 0,468 > 0,05$) who has not effect on attitude toward the advertisement. All imagery's dimensions have a positive effect on Aad: quantity ($T = 5,045$; $Sig.T = 0,000$), elaboration ($T = 3,406$; $Sig.T = 0,001$) and vividness/valence ($T = 6,816$; $Sig.T = 0,000$). *H4.1 and H4.7 are rejected. H4.3 and H4.5 are approved.*

7.5 Mediating role of imagery

The new factorial structure of the mental imaging does not allow verifying the hypotheses of mediation of both dimensions of vividness and valence between the provocation and the attitude to the advertising. *H4.2 and H4.8 are rejected.* According to Baron and Kenny (1986), the first condition of the mediating effect is verified. In fact provocation has a significant effect on attitude toward advertisement: negative trough irritation aspect of provocation and positive trough sensual aspect of provocation. The results related to the first and third mediation conditions of imagery's dimensions are shown in table1.

7.5.1 Mediating role of mental imagery's elaboration

Sensual aspect of provocation has no effect on elaboration. The second condition of the mediating effect is verified only for irritation aspect of provocation (see § 7.3). So we have to verify the third mediation condition. Mental imagery has a mediating role in the formation of attitude toward advertisement through its elaboration dimension. This mediation is *partial* since the significance of the coefficient of irritation aspect. *H4.4 is partially approved.*

7.5.2 Mediating role of mental imagery's quantity

Irritation aspect of provocation has no effect on quantity. The second condition of the mediating effect is verified only for sensual aspect of provocation (see § 7.3). So we have to verify the third condition. Mental imagery has a mediating role in the formation of attitude toward advertisement through its quantity dimension. This mediation is *partial* since the significance of the coefficient of sensual aspect. *H4.6 is partially approved.*

7.5.3 Mediating role of mental imagery's clarity

Provocation has a significant effect on clarity through its two dimensions. The second condition of the mediating effect is verified (see § 7.3).

So we have to verify the third condition. Mental imagery has not a mediating role in the formation of attitude toward advertisement through its clarity dimension. The third condition of mediation is not confirmed.

7.5.4 Mediating role of mental imagery's vividness/valence

Sensual aspect of provocation has no effect on *vividness/valence*. The second condition of the mediating effect is verified only for irritation aspect of provocation (see § 7.3). So we have to verify the third condition. Mental imagery has a mediating role in the formation of attitude toward advertisement through its vividness/valence dimension. This mediation is *total* since the irrelevance of the coefficient of irritation aspect.

8. Discussion

This research contributes to a better understanding of the variables involved on mental imagery when using female sensuality. It can be considered as an extension perspective of the persuasion model through the integration of relationships between congruence, provocation and mental imagery. Findings show that in an exposure to the female sensuality, perception of high congruency between model and product leads to minimize viewer's irritation (Pop et al. 2004; Peterson and Kerin 1977) consequently it decreases negative provocation extent.

Results indicate that congruence does not affect mental images elaboration and clarity. The insignificant impact of the congruence on the elaboration does not converge with the results of Helme-Guizon (1998) who has shown that congruence has negative effect on the elaboration. Result also verifies that congruence between product and model, raise mental images quantity. It's converging with the results of latest research that have shown that congruent attractive iconic stimulus generates more mental images (Miniard et al. 1991; Charmed 2000). Result indicates again that product-female model congruence, influence positively vividness/valence. This effect confirms the findings of previous researches who have shown that congruent stimulus provoke the appearance of positive valence of mental images (Helme-Guizon 1998; Heckler and Childers 1992) and that the vividness of these images is raised all the more with the increase of the congruence between the iconic stimulus and the advertised product (Miller and Marks 1992).

The theoretical contribution of this research involves the effect of provocation on mental imagery. The provocation through the female sensuality, detains a double action on the visual mental imagery. The first one is related to the irritating side. Female sensuality, when perceived as strongly irritating, stimulates the formation of mental representations of low valence, vividness, clarity and elaboration. The sexual and audacious character of female sensuality, in spite the fact that it weakened the clarity of the mental images, it increases their number. It is its second action. This research established also that female sensuality model is a provocative stimulus which sensual iconic elements try to get the attention (Vézina and Paul 1997) and contributes to the mental images construction (Shepard; Bugelski in Charmed, 2000; Paivio in Gavard-Perret and Helme-Guizon 2003). Study confirmed that the level of attractiveness of the visual insertions of an announcement affects the stimulation of the mental images (Miniard et al. 1991): the provocation increases the attention. It so increases the number of mental images. However, it decreases their level of valence, vividness, clarity and elaboration.

This investigation highlights the mediating mental imagery role in the persuasion process. Mental imagery has a mediating role in the formation of attitude toward advertisement through its three dimensions: elaboration, quantity and vividness/valence. This result is similar to Babin (in Babin and Burns 1998), Bone and Ellen (1992), Miller and Marks (1992), Babin and Burns (1997), Babin and Burns (1998) and Helme-Guizon (1998). The mediation effect of mental imagery, between provocation and attitude toward advertisement, is partial through her elaboration and quantity factors but total through her vividness/valence dimension. In contrast with the result founding by Mzoughi and Abdelhak (2011), which showed that the attitude toward the advertisement are not influenced by mental imagery. This research demonstrates that attitude toward the advertisement is positively influenced by the mental imagery, confirming hence the results of Bone and Ellen (1992), Babin and Burns (1997, 1998), Miller and Marks (1992, 1997), Burns and al. (1993), Kisielieus and Sternthal (in Oliver et al. 1993) and Helme-Guizon (1998).

The result also supported the conclusion that female sensual appeals should be used in relation to the product and is harmonious way (Peterson and Kerin 1977; Pop et al. 2004). This congruency reduces irritation, enhances number of vivid and positive mental imagery representations and builds a favorable attitude toward the advertisement.

9. Limitations and Future Research

This work highlights some limitations which open on a set of future research. The major limitation of experimental research is that studies are typically conducted in contrived or artificial laboratory settings. Results may not generalize or extrapolate to external settings. The experimental approach adopted is of type “laboratory”. The experimental context of the administration of the questionnaire is far from the reality of advertising exposure. It would be preferable to consider in future research, posters in which different products are presented in a different media such as a magazine, to give more credibility to stimuli and to be move closer to real frame exposure. Another limitation is related to the nature of the sample. It is composed by individuals aged 18 to 35 years with mostly a high education level. This consistency ensures good internal validity of the research. However, the sampling method adopted limits the results extrapolation. To improve external validity, this study should consider a larger sample including different categories of age, socio-professional level and place of residence. Immediate answers collected infer a temporal problem. The immediate response of the interviewee may change over time (Helme-Guizon 1997). To avoid this problem, it is possible to establish a questionnaire in two times: one immediately after exposure and the other after a time interval.

Research enriched the field of investigation on the effect of mental imagery. However some aspects of mental imagery had to be studied. The insufficiency of literature commonly highlighted concerns on the one hand, *the other sensory modalities* (Gutman 1988; MacInnis and Price 1987, Oliver et al. 1993). It is true that a stimulus causes the appearance of iconic mental images of the same nature (Childers and Houston in Gavard-Perret and Helme-Guizon 2003), but it can also arise auditory, olfactory or gustatory mental images (Fusella and Segal 1971; Bourne et al. 1979; Winnick and Brody 1984; Tracy et al. in Charmed 2000; Gutman 1988; Carasso and Ridout in Charmed 2000; Miller and Marks in Gavard-Perret and Helme-Guizon 2003; Wolpin and Weinsten 1983). It is highly interesting to study the effect of female sensuality on the four sensory modes of mental imagery. Lacking in the literature concerns on the other hand, *mental imagery's content*. It is the study of mental images occurring in the mind through verbalization or drawing (Demory and Lancaster in Gavard-Perret and Helme-Guizon 2003). This protocol helps shows the number of mental images formed (Burns and al. 1993), to determine their Level of attachment to the brand or product, to estimate their degree of abstraction or elaboration (Helme-Guizon 1998; Charmed 2000) and to analyze their content (Charmed 2000). It would have been possible to use the technique of analysis of content mental imagery. However, academic research avoids using of this empirical method (Gavard-Perret and Helme-Guizon 2003), with the exception of a few studies (Charmed 2000; Lao 2009). According to the authors, it lacks reliability because it obeys the subjectivity of interpretation (Nisbett and Wilson 1977; Wright 1980). This Rejection is little defensible, even the quantitative methods integrating scales obey introspection (Morris and Hompson; Ghiglione et al. in Gavard-Perret and Helme - Guizon 2003).

This work can be enriched by new variables including such as the Style of Processing. In the study of the effect of mental imagery on persuasion, it would be interesting to test the moderating effect of processing style. It expresses a preference to adopt a mode of treatment to treat verbal or visual stimuli, regardless of ability imaging (Childers et al.1985, Gardner et al. 1985; Macheswaran and Chaiken 1991). If the favorite style of treatment of the respondent coincides with the nature of stimulus, this variable will have a positive effect on emotions (Holbrook et al. 1984), the attitude towards the brand (Rossiter and Percy 1978) and the memory (Richardson 1978; Mzoughi and Abdelhak 2011). However, there is a lack of consensus on the moderating role of processing style in the formation of attitudes and purchase intent (Burns et al. 1993, Burns et al. in Gavard-Perret and Helme-Guizon 2003; Childers and Houston 1984; Helme-Guizon 1998). This discrepancy is caused by the lack of validity and reliability of scales (Childers et al. 1985; Richardson 1988; Gavard-Perret and Helme-Guizon 2003).

References

- Areni, C. S., & Cox, K. S. (1994). The persuasive effects of evaluation, expectancy and relevancy dimensions of incongruent visual and verbal information. *Advances in Consumer Research*, 21, 337-342.
- Alesandrini, K., & Sheikh, A. A. (1983). Research on Imagery: Implications for Advertising. In: Sheikh, A.A. (Eds.), *Imagery: Current theory, research, and application*. John Wiley & Sons, New York, NY, 535-556.
- Bloch, P. H., & Richins, M. L. (1992). You Look ‘Marvelous’: The Pursuit of Beauty and the Marketing Concept. *Psychology and Marketing*, 9, 3-15.
- Bello, D. C., Pitts, P. E. & Etzel M.J. (1983). The communication effects of controversial sexual content in television programs and commercials. *Journal of Advertising*, 12:3, .32-42.

- Belch, M. A., Holgerson, B. E., Belch G. E., & Koppman J. (1981). Psychophysical and cognitive responses to sex in advertising. *Advances in Consumer Research*, 9, 424-427.
- Ben Amor, N. (2005). Stratégie du shockvertising auprès d'un public jeune: Publicité à contenu sexuel et religiosité, application des équations structurelles. Master's thesis, Institut Supérieur de Gestion de Tunis.
- Belch, G. E., Belch, M. A., & Villarreal A. (1987). Effects of advertising communications review of research. *Research in Marketing*, 9, 59-117.
- Babin, L. A., & Burns, A. C. (1997). Effects of print ad pictures and copy containing instructions to imagine on mental imagery that mediates attitudes. *Journal of Advertising*, 26:3, 33-45.
- Babin, L. A., & Burns, A. C. (1998). A modified scale for the measurement of communication-evoked mental imagery. *Psychology and Marketing*, 15:3, 261-278.
- Baron, R. M., & Kenny D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations. *Journal of personality and social Psychology*, 51:6, 1173-1182.
- Burns, A. C., Biwas, A., & Babin, L. A. (1993). The operation of visual imagery as a mediator of advertising effects. *Journal of Advertising*, 22:2, 71-85.
- Branthwaite, A. (2002). Investigating the power of imagery in marketing communication: evidence-based techniques. *Qualitative Market Research*, 5:3, 164-172.
- Bone, P. F., & Ellen, P. S. (1992). The generation and consequences of communication-evoked imagery. *Journal of Consumer Research*, 19:1, 93-104.
- Bourne, L. E. Jr., Domiowsky, R. L., & Loftus E. F. (1979). *Cognitive processes*, New Jersey, Prentice-Hall.
- Bodeeb, J. (2011), How to be a sensual woman. [Online] Available : <http://www.livestrong.com/article/19538-sensual-woman/#ixzz12k2pGp5g>, (May 13, 2011).
- Childers, T. L., Houston, M. J., & Heckler, S. E. (1985). Measurement of individual differences in visual versus verbal information processing. *Journal of Consumer Research*, 12:2, 125-134.
- Charmed, C. (2000). Les facteurs d'efficacité du contenu des images mentales en communication persuasive. Paper presented at the Marketing Research conference of Bourgogne, Dijon.
- Childers, T. L., & Houston, M. J. (1984). Conditions for a picture-superiority effect on consumer memory. *Journal of Consumer Research*, 11:3, 643-654.
- De Pelsmacker, P., & Van Den Bergh, J. (1996). The communication effects of provocation in print advertising. *International Journal of Advertising*, 15:18, 203-221.
- Driessen, C. E. (2005). Message communication in advertising: selling the Abercrombie and fitch image, UW-L. *Journal of Undergraduate Research*, 8, 1-12;
- Dichter, E. (1990). Example of Sexual Signification in Consumption. In H. Holman and Michael R. Solomon (Eds.), *Advances in Consumer Research*, Association for Consumer Research , 17.
- De Barnier, V., Maille, V., Valette-Florence, P., & Gallopel, K. (2004). Impact des messages à caractère choquant sur la persuasion publicitaire : une étude interculturelle. Presented at XXe AFM conference, St Malo, 6-7 May 2004.
- Dudley, C.S (1999). Consumer attitudes toward nudity in advertising. *Journal of Marketing Theory and Practice*, 7:4, 89-96.
- Didellon, L. & Valette-Florence, P. (1996). L'utilisation des indices d'ajustement dans les modèles d'équations structurelles : présentation et recommandations d'usage. Presented at the Actes des 13th National day of IAE, Toulouse, 16-17 Avril 1996.
- Edell, J. A. & Staelin, R. (1983). The information processing of picture in print advertisements. *Journal of Consumer Research*, 10:1, 45-61.
- Englis, B. G., Solomon, M. R., & Olofsson, A. (1993). Consumption imagery in music television: A bi-cultural perspective. *Journal of Advertising*, 22, 4, 21-23.
- Ellen, P. S., & Bone, P. F. (1991). Measuring communication-evoked imagery processing. *Advances in Consumer Research*. 18, 806-812.
- Evrard, Y., Pras, B., & Roux, E. (1997). *Market, Eudes et Recherches en Marketing*. Nathan Edition.
- Fleck-Dousteysier, N., & Korchia, M. (2006). Celebrities in advertising: the role of congruency. Work Paper N°359, DMSP Research Center.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18, 382-388.
- Fusella, V., & Segal, S. J. (1971). Effect of images in six sense modalities on detection of visual signal from noise (Visual signal detection from noise, investigating mental images effects in six sense modalities). *Psychonomic Science*, 24, 55.
- Gould, S. J. (1994). Sexuality and ethic in advertising: a research agenda and policy guideline perspective. *Journal of Advertising*, 23:3, 73.
- Gould, S. J. (1992). The production, marketing and consumption of sexually explicit material in our sexually society: A public policy dilemma. *Journal of Public & Marketing*, 11, 135-148.
- Gallopel, K., & Petr, C. (2000). Utilisation de la peur dans les campagnes de prévention : Résultats et discussions autour des comportements tabagiques de jeunes français. Presented at the First Marketing Tendency in Europe congress, ESCP-EAP, Venise, (november, 2000).

- Gavard-Perret, M. L. (1991). La présence humaine dans l'image, facteur d'efficacité de la communication publicitaire ? Une expérimentation dans le domaine du tourisme. Ph.D Thesis, University of social science, Grenoble, E.S.A.
- Gavard-Perret, M. L. (1987). L'image : supériorité et limites. Relation avec l'imagerie mentale et le langage verbal. *Recherche et Application Marketing*, 2 :2, 49-80.
- Gavard-Perret, M. L., & Helme-Guizon, A. (2003). L'imagerie mentale un concept à (re) découvrir pour ses apports en marketing. *Recherche et Application Marketing*, 18 : 4, p.59.
- Gallen, C. (2005). Le rôle des représentations mentales dans le processus de choix, une approche pluridisciplinaire appliquée au cas des produits alimentaires. *Recherche et Application Marketing*, 20 :3, 59-78.
- Goossens, C. (1994). Visual Persuasion: Mental Imagery Processing and Emotional Experiences. [Online] Available : http://www.yaffecenter.org/downloads/Visual_Persuasion/goossens.pdf. (July 13, 2013).
- Gutman, E. (1988). The Role of Individual Differences and Multiple Senses in Consumer Imagery Processing: Theoretical Perspectives. *Advances in Consumer Research*, 15, Michael J. Houston (Eds.), Provo, Association for Consumer Research, 191-196.
- Gardner, M. P., Mitchell, A. A., & Russo, J.E. (1985). Low involvement strategies for processing advertising. *Journal of Advertising*, 14:2, 4-12.
- Hunt, S., & Scott, V. (1986). A general theory of marketing ethics. *Journal of Macromarketing*, 33, 5-16.
- Henthorne, T. L., & LaTour, M. S. (1995). A model to explore the ethics of erotic stimuli in print advertising. *Journal of Business Ethics*, 14, 7, 561-569.
- Helme-Guizon, A. (1998). Peut-on expliquer l'efficacité d'une annonce publicitaire par les images mentales qu'elle suscite ? *Actes de l'Association Française du Marketing*, 14, 243-260.
- Helme-Guizon, A. (1996). Imagerie mentale et communication persuasive : un état de l'art. *Actes de l'Association Française de Marketing*, 12, 159-186.
- Helme-Guizon, A., (1997). Image, imagerie mentale et effets de la communication persuasive : application à une œuvre d'art incluse dans une annonce publicitaire. Ph.D Thesis, Paris IX Dauphine University.
- Heckler, S. E., & Childers, T. L. (1992). The role of expectancy and relevancy in memory for verbal and visual information: what is incongruity? *Journal of Consumer Research*, 18, 475-492.
- Hetsroni, A. (2007). Sexual content on mainstream tv advertising: a cross-cultural comparison. *Sex Roles*, 57, 201-210.
- Hoyers, D. W., & MacInnis, D. J. (1997). Consumer Behaviors. in Houghton Mifflin (Eds.), Boston, 157-161.
- Holbrook, M. B and Batra R. (1987). Assessing the role of emotions as mediators of consumer responses to advertising. *Journal of Consumer Research*, 14, 404-420.
- Holbrook, M. B., Chesnut, R.W., Oliva, T.A., & Greenleaf, E. A. (1984). Play as consumption experience: the role of emotions, performances and personality in the enjoyment of games. *Journal of Consumer Research*, 11:2, 728-739.
- Joannis, H. (1995). De la stratégie marketing à la création publicitaire. Dunod, Paris.
- Jones, M. Y. Stanaland, A. J. S. , & Geld, B. D. (1998). Beefcake and Cheesecake: Insights for Advertisers. *Journal of Advertising*, 27:2, 33-51.
- Judd, B. B., & Alexander, M. W. (1983). On the Reduced Effectiveness of Some Sexually Suggestive Ads. *Academy of Marketing Science, Journal (pre-1986)*, 156.
- Kim, M., & Lennon, S. (2008). The effects of visual and verbal information on attitudes and purchase intentions in internet shopping. *Psychology & Marketing*, 25:2, 146-178.
- Kisielius, J., & Sternthal, B. (1984). Detecting and explaining vividness effects in attitudinal judgments. *Journal of Marketing Research*, 21, 54-64.
- La Tour, M. S., Pitts, R.E., & Snook Luther, D. C. (1990). Female nudity, arousal and Ad response: An experimental investigation. *Journal of Marketing*, 19: 4, 51-62.
- Lambiase, J., Morgan, S., Carstarphen, M., & Zavoina, S. (1999). Cheesecake and beefcake: No matter how you slice it, sexual explicitness in advertising continues to increase. *Journalism and Mass Communication Quarterly*, 21, 7-20.
- La Tour, M. S. (1990). Female nudity in print advertising: Analysis of gender differences in arousal and Ad response. *Psychology and Marketing*, 7:1, 65-81.
- La Tour, M. S., Pitts, R. E., & Snook Luther, D. C. (1990). Female nudity, arousal and Ad response: An experimental investigation. *Journal of Marketing*, 19, 4, 51-62.
- La Tour, M. S., & Henthorne, T. L., (1994). Ethical judgments of sexual appeals in print advertising. *Journal of Advertising*, 23:81, 140.
- La Tour, M. S., & Henthorne, T. L. (1993). Female Nudity: Attitudes toward the Ad and the Brand, and Implications for Advertising Strategy. *Journal of Consumer Marketing*, 10:3, 25-32.
- Lutz, K. A., & Lutz R. J. (1978). Imagery's eliciting strategies: review and implications of research. *Advances in Consumer Research*, 5, 611-620.
- Lutz, K. A., & Lutz, R. J., (1977). 'Effects of interactive imagery on learning: applications to advertising. *Journal of Applied Psychology*, 62:4, 493-498.
- Lallement, O. (2001). La vision du luxe et de ses frontières une approche fondée sur le jugement de typicalité. Presented in the 17th International Congress of AFM.

- Lombardot, E. (2007). La nudité en publicité: quelle influence sur l'attention portée à l'annonce et la fonction mémorielle de la marque? *Recherche et Application Marketing*, 22:4, 23-41.
- Lavoisier, L. M. (2000). Contribution à une meilleure compréhension du pouvoir de persuasion des communications de service public. Une application aux messages télévisés de la sécurité routière française. Ph.D Thesis, Université de Paris I- Sorbonne.
- Lao, A. (2011). Etude exploratoire des effets de l'imagerie mentale issue de la présentation des produits sur un site marchand : Proposition d'un modèle conceptuel de recherche. *Management et Avenir*, 44, 101-123.
- Miller D. W, Hadjimarcou J., & Miciak A. (2000). A scale of measuring advertisement evoked mental imagery. *Journal of Marketing Communications*, 6, 1-20
- Miller, D. W., & Marks, L. J. (1992). Mental imagery and sound effects in radio commercials. *Journal of Advertising*, 21:4, 83-93.
- MacInnis, D. J., & Price, L. L. (1987). The role of imagery in information processing: Review and extensions. *Journal of Consumer Research*, 13:4, 473-491.
- McQuarrie, E. F., & Mick, D. G., (1992). On resonance: a critical pluralistic inquiry into advertising rhetoric', *Journal of Consumer Research*. 19:2, 180-197.
- Miller, D. W., & Marks, L. J. (1997). The effects of imagery-evoking radio strategies on affective responses. *Psychology and Marketing*, 14:4, 337.
- Miniard, P. W., Sunil, B., Kenneth, R. L., Dickson, P.R., & Unnava, H. R. (1991). Picture-Based Persuasion Processes and The Moderating Role of Involvement. *Journal of Consumer Research*, 18, 92-107.
- Mzoughi, N., & Abdelhak, S., (2011). The Impact of Visual and Verbal Rhetoric in Advertising on Mental Imagery and Recall. *International Journal of Business & Social Science*, 2:Iss9, 257.
- Macheswaran D., & Chaiken S. (1991). Promoting systematic processing in low-motivation settings: effects of incongruent information on processing and judgment. *Journal of Personality and Psychology*, 61:1, 13-25.
- Nisbett, R. E., & Wilson, T. D. C. (1977). Telling more than we can know: verbal reports on mental processes. *Psychological Review*, 84:3, 231-259.
- Oliver, R. L. Robertson, T. S., & Mitchell, D. J. (1993). Imagining and analyzing in response to new product advertising', *Journal of Advertising*, 22:4, 35-50.
- Pirron, F., & Young, M. (1996). Consumer Advertising in Germany and the United States: A Study of Sexual Explicitness and Cross-gender Contact. *Journal of Consumer Marketing*, 8, 211-223.
- Putrevu, S. (2008). The influence of involvement and NFC on consumer response toward sexual and nonsexual appeals. *European Advances in Consumer Research*, 8, 498-499.
- Pope Nigel, K. L I., Voges Kevin, E., & Brown Mark, R. (2004). The effect of provocation in the form of mild erotica on attitude to the ad and corporate image. *Journal of Advertising*, 33:1, 69-82.
- Peterson, R. A., & Kerin, R. A. (1977). The female role in advertisements: some experimental evidence. *Journal of Marketing*, 41, 59-63.
- Peterson R. A. (1994). A meta-analysis of Cronbach's coefficient alpha. *Journal of Consumer Research*, 12:2, 381-391.
- Pavio, A. (1971). *Imagery and verbal processes*. New York, Holt, Rinehart & Winston.
- Paivio, A. (1969). Mental imagery in associative learning and memory. *Psychological Review*, 7:3, 241-263.
- Reichert, T. (2003). The prevalence of sexual imagery in ads targeted to young adults. *The Journal of Consumer Affairs*, 37:2, 403-412.
- Reichert, T. (2002). Sex in advertising research: A review of content, effects, and functions of sexual information in consumer advertising. *Annual Review of Sex Research*, 13, 241-273
- Richmond, D., & Hartman, T. P. (1982). Sex appeal in advertising. *Journal of Advertising Research*, 22:5, 53-61.
- Reichert, T., & Lambiase, J. (2008). Sex in advertising : perspective in erotic appeal. Published in the Taylor & Francis e-Library.
- Reichert, T., & Ramirez, A. (2000). Defining Sexually Oriented Appeals in Advertising: A Grounded Theory Investigation. In *Advances in Consumer Research*, 27, Stephen J. Hoch & Robert J. Meyer, (Eds.) Provo, UT: Association for Consumer Research, 267-273.
- Reichert, T., Heckler, S. E., & Jackson S. (2001). The effect of sexual social marketing appeals on cognitive processing and persuasion. *Journal of Advertising*, 30:1, 17-27.
- Richins, M. L. (1991). Social Comparison and the Idealized Images of Advertising. *Journal of Consumer Research*, 18, 71-83.
- Reidenbach, R. E., & Mc Cleary, K. W (1983). Advertising and male nudity: An experimental investigation. *Journal of Marketing*, 19:4, 51-62.
- Rossiter, J. R. & Percy, L. (1980). Attitude change through visual imagery in advertising. *Journal of Advertising*, 9:2, 10-16.
- Reid, L. N., Salmon, C., & Soley, L. C. (1984). The nature of sexual content in television advertising. *Proceedings of the American Marketing Association*, 214-216.
- Richardson, A. (1988). Vividness and unvividness: reliability, consistency and validity of subjective imagery ratings. *Journal of Mental Imagery*, 12:3&4, 115-122.
- Richardson, A. (1978). Mental imagery and memory: coding ability or coding preference. *Journal of mental Imagery*, 2:1, 101-115.

- Solomon, M. R., Ashmore R. D., & Longo, L. C. (1992). The Beauty Match-up Hypothesis: Congruence Between Types of Beauty and Product Images in Advertising. *Journal of Advertising*, 21:4, 23.
- Soley, L. C., & Kurzbard, G. (1986). Sex in Advertising: a comparison of 1964 and 1984 magazine advertisements. *Journal of Advertising*, 15:3, 46-54.
- Soley, L., & Reid, L. (1988). Taking it off: Are models in magazine ads wearing less? *Journalism and Mass Communication Quarterly*, 65, 960-966.
- Simpson, P. M., Horton, S., & Brown, G. (1996). Male nudity in advertisements: a modified and extension of gender and product effects. *Academy of Marketing Science*, 24:3, 257-262.
- Steadman, M. (1969). How Sexy Illustrations Affect Brand Recall. *Journal of Advertising*, 9:1, 15-19.
- Scott, L. M. (1994). Images in advertising: the need for a theory of visual rhetoric. *Journal of Consumer Research*, 21:2, 252.
- Smith, R. A., Houston, M. J., & Childers T. L. (1984). Verbal vs visual processing mode: an empirical test of the cyclical processing hypothesis. *Advances in Consumer Research*, 11, 75-80.
- Schlosser, A. E. (2003). Experiencing products in the virtual world: the role of goal and imagery in influencing attitudes versus purchase intentions. *Journal of Consumer Research*, 30: 2, 184.
- Tinkham, S., & Reid, L. N. (1988). Sex Appeals in Advertising Revisited: Validation of a Typology. In *The Proceedings of the 1988 Conference of the American Academy of Advertising*, John Leckenby (Eds.), Austin TX: American Academy of Advertising, 118-123.
- Thompson, C. J., & Hirshman, E. C. (1995). Understanding the Socialized Body: a Poststructuralist Analysis of Consumers's Self Conceptions, Body Images, and Self-care Practices. *Journal of Consumer Research*, 22, 139-153.
- Tissier-Desbordes, E., & Manceau, D. (2003). La réception de la nudité en publicité : Provocation ou esthétisme. Presented in 3th International Marketing Tendency in Europe Congress, Venise, (Novembre 28-29, 2003).
- Unnava, H. R., & Burnkrant, R. E., (1991). An imagery processing view of the role of pictures in print advertisements. *Journal of Marketing Research*, 28:2, 226-231.
- Vézina, R., & Paul O. (1994). *Toward understanding of the role and effect of provocation in advertising, marketing its dynamic challenges*. Proceedings of the 23rd EMAC-Conference, Maastricht, 1117-1134.
- Vézina, R., & Paul, O. (1997). Provocation in advertising: a conceptualization and an empirical assessment. *International Journal of Research in Marketing*, 14:2, 177-192.
- Wells, W., Burnett, J., & Moriarty, S. (1998). *Advertising: Principles and practice*. Upper Saddle River, NJ: Prentice Hall.
- Weller, R. B., Roberts, C. R., & Newhaus, C. (1979). A longitudinal Study of the effect of erotic content upon advertising brand recall. *Current Issues and Research in advertising*, 1, 145-162.
- Winnick, W. A., & Brody, N. (1984). Auditory and visual imagery in free recall. *The Journal of Psychology: Interdisciplinary and Applied*, 118:Iss1, 17-29.
- Wolpin, M., & Weinsten, C. (1983). Visual imagery and olfactory stimulation. *Journal of Mental Imagery*, 7:1, 63-73.
- Wright, P. (1980). Message-evoked thoughts: persuasion research using thought verbalizations. *Journal of Consumer Research*, 7: 2, 151-175.

Table 1: Mediating role of imagery (1st & 3rd conditions of mediation)

<i>Independent data</i>	<i>Dependent data</i>	<i>R²</i>	<i>F</i>	<i>Sig.F</i>	<i>Bêta</i>	<i>T</i>	<i>Sig.T</i>
	Aad	0,133	16,238	0,000			
Irritation aspect of provocation					-0,207	-3,132	0,002
Sensual aspect of provocation					0,314	4,761	0,000
	Aad	0,071	7,580	0,001			
Irritation aspect					-0,176	-2,518	0,013
Elaboration					0,172	2,469	0,014
	Aad	0,154	17,925	0,000			
Sensual aspect					0,258	3,823	0,000
Quantity					0,242	3,584	0,000
	Aad	0,043	4,409	0,013			
Irritation aspect					-0,205	-2,903	0,004
Clarity					0,010	0,146	0,884
	Aad	0,115	12,755	0,000			
Sensual aspect					0,347	5,009	0,000
Clarity					0,130	1,879	0,062
	Aad	0,174	20,691	0,000			
Irritation aspect					-0,089	-1,300	0,195
Vividness/Valence					0,381	5,585	0,000