Journal of Business & Management (COES&RJ-JBM)

ISSN (E): 2306-7179 ISSN (P): 2306-8043

Publisher: Centre of Excellence for Scientific & Research Journalism Online Publication Date & Issue: 1<sup>st</sup> July 2013, Vol.1, No.3, July 2013

http://centreofexcellence.net/J/JBM/JBM Mainpage.htm

# SUBLIMINAL MARKETING: AN EXPLORATORY RESEARCH IN LEBANON

# HUSSIN HEJASE, BASSAM HAMDAR, GEORGE FARHA, ROULA BOUDIAB, NOURI BEYRUTI

#### Abstract

Marketing advertising is one of the fundamental activities performed by all businesses. Millions of dollars are budgeted to attract new customers and to retain current customers. However, there has been a continuous debate among marketers about the use of subliminal messages in advertising. Many believe in the power of the subconscious and propose that subliminal messages are hidden in ads and are addressed to that hidden part of the brain. Although researches in this field have not proven that subliminal messages affect human behavior per se, results of the studies that examined the effect of subliminal messages have been contradictory; there is no clear evidence as to how this concept works. The purpose of this paper is to shed light on the dilemma of subliminal messages as used in Lebanese marketing advertising. A sample of MBA students has been exposed to a selection of examples of such messages; the results of these experiments are analyzed, tested, and then analyzed throughout the paper.

This research is exploratory in nature and uses two research techniques, namely a survey research to quantify findings, and a qualitative research to conduct an in-depth literature review that is supported by structured interviews with selected figures from the Lebanese market. The outcome is an assessment of the respondents' literacy and attitude towards subliminal messages. Results help shed light on the topic in question as applied in Lebanon and guide marketers to the advantages and disadvantages of subliminal messages in ads.

**Keywords:** Advertising, marketing, subliminal messages, Lebanon

**Citation:** Hussin Hejase, Bassam Hamdar, George Farha, Roula Boudiab, Nouri Beyruti, (2013) "Subliminal Marketing: An exploratory Research in Lebanon" Journal of Business & Management (COES&RJ-JBM) Vol.1, No.3, pp.112-135.

## Introduction

"There are hundreds of indications leading us to conclude that at every moment there is in us an infinity of perceptions, unaccompanied by awareness or reflection... (p. 53). The choice we make arises from these insensible stimuli, which, mingled with the actions of objects and our bodily interiors, make us find one direction of movement more comfortable than the other" (Leibniz, 1981, p. 166). Since the 1950s, the concept of subliminal perception has been a debatable issue. Many believe in the power of the subconscious mind and propose that subliminal messages are hidden in ads and are addressed to that hidden part of the brain, while others believe that subliminal messages do not affect human's behavior. Results of the studies that examined the effect of subliminal messages on consumers were contradictory; there is no clear evidence as to how the mechanism of this concept works (Nueberg, 1988 & Trappy, 1996).

Subliminal perception happens when weak stimuli are perceived without the human's awareness (Dixon 1971). According to Dixon, subliminal perception in its wildest sense means any or all of the following states of affairs:

- 1- The subject responds to stimuli but is partially aware of them in some previous cases.
- 2- The subject responds to stimuli he is totally unaware of.
- 3- The subject reports that he is stimulated but doesn't know what the stimulus was.
- 4- He reports awareness of the stimulus but denies any awareness of the fact that he had responded to it.
- 5- The subject reports awareness of the stimulus, and of making a response, but professes complete ignorance of any contingency between the two.
- 6- Finally, the subject is aware of responding to the stimulus, but is unaware of the stimulus that he had responded to (p. 12).

Although researches in this field haven not proven that subliminal messages affect human's behavior (Wilfong, 2002, p. 22), yet, many ads include subliminal messages; examples are going to be highlighted throughout this paper.

Subliminal advertising has been defined by Trappey (1996) as "...a technique exposing consumers to product pictures, brand names or other marketing stimuli without the consumers having conscious awareness: Once exposed to a subliminal stimulus, the consumer is believed to decode the information and act upon it without being able to acknowledge a communication source" (p. 517). While, Aylesworth, Goodstein and Karla (1999) define subliminal advertising as "the use of words, pictures and shapes that are purposely inserted into advertising materials so that the viewers of the material cannot perceive the imagery at a conscious level, but rather at a subconscious level" (p. 74).

According to Pratkanis and Greenwald (1988, cited in Wilfong, 2002, p. 2) subliminal messages used in ads are categorized into four stimuli:

- a- Sub threshold stimuli: These are presented at energy levels; they are too weak to be detected by the audience. For example, flashing words onto a screen so quickly that the audience is not aware of them.
- b- Masked stimuli: They are hidden from the audience by the presentation of some other, overriding stimuli, e.g. briefly presenting the stimulus that is immediately followed by a bright flash of light.
- c- Unattended stimuli: They are presented in such a way that the embedded figure is unlikely to be segregated from its figural context, e.g., hiding the figure of a naked body in a picture.
- d- Figuratively transformed stimuli: These are words or blurred / distorted pictures to the point of being are unidentified, e.g., command recorded backward and inserted into popular music.

Most of these hidden messages were either images of sexual context, or images of violence and self-destruction.

### **Literature Review**

"If the buyer's shopping gets any worse, we'll have to hit the consumer over the head and get him to sign while he's unconscious" (Packard, 1957, p. 23). This statement expresses the inherent theme of this study: "Marketers have long flirted with 'subliminal'" techniques to implant their promotional messages and instructions in our minds without us being aware" (Benady, 2003).

Subliminal perception is still a controversial issue; there is no clear indication about its work mechanism. Since the claim of James Vicary in 1957 about the effect of subliminal messages, further studies have failed to prove the effectiveness of subliminal messages on human's behavior (Wilfong, 2002, p. 19). However, Merikle (2000) contends that "subliminal perception occurs whenever stimuli presented below the threshold for awareness are found to influence thoughts, feelings, or actions. The term subliminal perception was originally used to describe situations in which weak stimuli were perceived without awareness. In recent years, the term has been applied more generally to describe any situation in which unnoticed stimuli are perceived" (Para 1).

Vicary claimed that at a movie theater, the audience was shown two advertising messages, *Eat Popcorn* and *Drink Coca-Cola*, while they watched the film *Picnic*. According to Vicary, a message was flashed for 3/1000 of a second once every five seconds. The duration of the messages was so short that they were never consciously perceived. Even though the customers were not aware of perceiving the messages, Vicary claimed that over the six-week period the sales of popcorn rose 57.7% and the sales of Coca-Cola rose 18.1%. However, Vicary never released a detailed description of his study and there has never been any independent evidence to support his claims (Merikle, 2000, Para 6).

According to Advertising Age "the Hidden Persuaders" is the top of best sellers containing a terrifying thesis, namely, advertisers are trying to control people's mind using the power of neuroscience. However, observations show that motivation research efficacy is overestimated and bio-physicists cannot control a person's mental processes, emotional reactions and sense perceptions by bio-electrical signals. Although, marketers today are finding difficulty in getting people to watch ads or pay more for a brand; however, based on the aforementioned reported observations, one should forget about controlling the consumers using physiological stimuli (Arndorfer, Atkinson, Bulik, McDonough, and Oser, 2005, March, Para. 15).

## **Subliminal Perception Physiology**

Wittrock (1980) contended that the brain is the center of all activities. Human behavior is the reflection of what the human mind is. The brain is a set of interconnection nerve cells or neuron and represents the pathways through which an input of excitatory energy is transmitted and processed toward channels of motor output. A human brain consists of 10<sup>12</sup> neurons. The number of interconnections between these neurons is greater than the total number of atoms making up the entire universe. The patterns of these connections build up the higher and more integrative processes- sensation, perception, memory, emotion, motivation, thought and awareness. Information and events from the external world is represented in the brain not as is, but is transformed through the neuron's coding system (Wittrock, 1980).

If one wants to consider subliminal perception from the physiological point of view, one should consider two kinds of limen which are considered subliminal. The first limen occurs when excitation of neurons is below the threshold. According to Whitlow (2004), "the Latin for "threshold" is *limen* (l-m n) from which comes the terms *subliminal*, meaning an event that is below the threshold for awareness, and *supraliminal*, meaning an event above the threshold for awareness" (p. 1). The first limen process does not lead to action potential but creates effect to lower the cell's discharge threshold for any subsequent stimulation. CliffsNotes.com (2013) contends that "the term **potential** refers to a difference in electrical

charges. Neurons have two types of potentials, a resting potential and an action potential. The neural threshold must be reached before a change from resting to action potential occurs" (Para 2). The second limen is the synaptic transmission threshold. "The **synapse** is the name given to the junction between neurons where information is exchanged. The action potential causes information to be transmitted from the first neuron (**presynaptic neuron**) to the second neuron (**postsynaptic neuron**) by secretion of chemicals. Stimulation of the presynaptic neuron to produce an action potential causes the release of chemicals into the synaptic cleft (zone separating the two neurons). Most of the released chemicals bind with molecules at special sites, **receptors**, on the postsynaptic neuron" (Cliffnotes.com, 2013, Para 7). Here, the subliminal stimulus will not pass the synaptic junction (cleft) but may alter the synaptic threshold for a subsequent stimulus. But these processes involve graded potential, generative potentials, and actions potentials (Dixon, 1971, p. 246). Subliminal perception may result from temporal or spatial summation probably at the peripheral receptor.

Beitel (1934; cited in Dixon, 1971) proved that the coinciding in time of two spatially separated subliminal tests fields produces a consciously perceptive experience. Murch (1969; cited in Dixon, 1971), based on his experiment in which he used supraliminal presentations and subliminal completion, concluded that subliminal perception is perhaps due to retinal summation of the subliminal and supraliminal stimuli. According to this theory, the subliminal stimulus produces a local graded potential change which, while not reaching a level sufficient for initiating a spike (nerve impulse), that is, not sufficiently strong enough to allow an electrical charge to cross the synapse between neurons; however, it does allow a chemical change that allows the next supraliminal stimulus to cross the synapse, which would significantly increase sensitivity of the retinal elements in question (p. 247).

In order to put the aforementioned theory in practice, a study, cited by Peretti and Jong (1996), was conducted at Richard J. Daley College, Chicago to determine the effect of subliminal number stimulus on verbal responses. Subjects in this experiment were one hundred –fifty, freshman and sophomore students who were divided equally into a control group and an experimental group. A super 8 mm projector was used to project numbers from thirty to fifty in sequence with no variations to the control group, while it projected the same numbers in sequence, with variations of interspersed subluminal stimuli to the experimental group. Both groups viewed the film in a dark room; the experimental group saw the film in which India ink was used to produce the stimuli: a film editor had cut, spliced and secured the subliminal stimuli in the experimental film (p. 411).

The stimulus was the number 39 which was placed before the number 30, and then after numbers 35, 40, 45, and 50. At the conclusion of the experiment, both groups were asked to write down numbers from 30 to 50. After data collection, the control group wrote down the following numbers with their respective frequency of occurrence 34(11), 32(7), 47(7), 44(5), and 49(5). In comparison, forty two of the seventy five (56%) of the experimental group wrote down the number 39, and the next two frequent numbers were 44(13) and 36(12) (p. 412).

Peretti & Jong (1996) found that subliminal number stimuli affect verbal response. This study supports the bio-physiological theory regarding retinal summation of the subliminal and supraliminal stimuli. "The subliminal stimulus 39 was not sufficiently strong enough to allow an electrical charge to cross the synapse between neurons. However, it did allow a chemical change allowing the next supraliminal stimulus (numbers 30, 36, 41 and 46 respectively) to cross the synapse. The retinal summation of the subliminal and supraliminal stimuli stored in the retina, mixed, and they both influenced the experimental group performance" (ibid).

## The Unconscious

According to Nerwith (2003), the unconscious by definition is the hidden part of the mind that contains thoughts, memories, feelings, and ideas that the person is not aware of, but expresses them in dreams and dissociated acts (p. 167).

The concept of unconscious was developed by Freud. He believed that the unconscious is a reservoir of needs, instinctual desires, and psychic actions. Memories and past thoughts can be deleted from the awareness, but they can direct thoughts and feelings from the unconscious. According to Freud what is in one's mind is not identical with what one is conscious of: what is going on in one's mind and what one hears of it are two different things. Other psychologists view the unconscious "as an expanding structure of mind, a set of functions that generate the powerful forces and modes of thoughts traditionally associated with the unconscious and that act both as the center of psychopathology and as a source of energy, hope, and creativity" (ibid, p.166).

In psychoanalysis, the concept of unconscious is a place in one's mind that is very appealing; it explains some answers to questions as where memory, desire, and dreams are when they are not in one's awareness (ibid, p. 167). According to Hasher and Zacks (1984) individuals can register information about the frequency of events without consciously being aware of the conscious information processing. Moreover, they demonstrated that perceivers do the aforementioned registering of information unintentionally, ?automatically? regardless of the instruction they receive and regardless of the information processing goals they have. This ability has nothing to do with the individual's age, personality, education, and intelligence.

There is evidence that unconsciously perceived information can remain in memory for a significant period of time. This evidence came from a Meta-analysis conducted on studies that investigated memory of events during general anesthesia (Merikle & Daneman, 1998). The altered state induced by general anesthesia provides an interesting area to explore unconscious cognition. According to Merikle (2000), one goal of general anesthesia is to ensure that surgical patients are completely unaware of all events that occur during anesthesia (Para 5).

The results of the Meta-analysis were straightforward. It showed that there is considerable evidence of memory for specific information presented during anesthesia, as long as the memory test is administered within 24 hours after the surgery. This implies that the memory tests were administered in the recovery room as soon as the patients regained consciousness. In contrast, when the memory tests were delayed two or more days following surgery, there is little evidence of memory for any specific information presented during anesthesia. Given the very reasonable assumption that patients undergoing general anesthesia are unconscious of events in the external environment, then the results of this Meta-analysis provide additional support for the conclusion that unconsciously perceived information can have a relatively long-lasting impact (Merikle, 1998).

## **Subliminal Perception**

People are poor at articulating the true causes of their actions and recognizing the importance of critical causal stimuli (Nisbett & Wilson, 1977). If one is not aware of the real causes that determine one's behavior, then it is easy to manipulate and influence one's actions. For example, technology and knowledge are possible tools to activate people's goals without their awareness. While Bargh (2002) contends that no one can induce goals that people already don't have, but one could affect the goals already possessed by activating and manipulating these goals. Therefore, subliminal effect should operate on the person's goals and needs and the needs that the product is supposed to satisfy.

Motivation research in the 1960s acknowledged the important role of non-consciousness on people's actions. It was postulated that the subconscious mind controlled motivations and human behavior. Dichter (1964, p. 12) as cited by Berger (2012) claimed that "whatever your attitude is toward modern psychology or psychoanalysis, it has been proven without doubt that many of our daily decisions are governed by motivations over which we have no control and of which we are quite unaware" (p. 77).

### ?Subliminal Stimulation and Behavior

Can subliminal stimulus influence behavior? Some experiments suggest that it could. In one experiment, researchers Bargh, Chen and Burrows (1996) concluded that the unconscious have direct effect on behavior. In their experiment, participants were given a sentence completion task; the sentences had a number of words related to the elderly (example old, wise, retired). After the conclusion of the experiment, these participants walked more slowly to the elevator than the participants in the control group; it looked as if they had internalized the concept of the elderly. It is worth mentioning that none of the experiment group participants noticed the decrease in their walking speed or the frequency of usage of words related to the elderly. While Doyen, Klein, Pichon and Cleeremans (2012) contend that "priming alone was not sufficient to promote a priming effect on walking speed comparable to Bargh et al's. We also had to manipulate experimenters' beliefs so that they would expect the primed subjects to walk slower. This finding is congruent with recent evidence showing that primed behavior is sensitive to the context in which it takes place." (p. 6)

Subliminally presented stimuli can influence behavior indirectly; this is attained by activating the concepts that can influence the way individuals interpret the behavior of others (Neuberg 1988). For example, if the concept of hostility was activated subliminally, and caused individuals to "read" hostility into the behavior of others, these individuals might then choose to adopt a hostile course of action themselves.

Karremans (2005) at the University of Njiman in Netherlands, as cited by Motluk (2006), wanted to examine if subliminal messages induce volunteer participants to choose a particular brand of drink. The two brands that were chosen were Lipton Ice and mineral water Spa Roof. 61 participants volunteered for the study; they were asked to count how many times a string of capital "Bs" flashes upon the screen. However, before the appearance of the Bs, a subliminal message flanked on the screen, and it was Lipton Tea for the experiment group, and "Nipeic Toi" for the control. After completing the experiment, volunteers were asked to choose between Lipton tea and Spa Roof: the thirsty volunteers were more likely to choose Lipton Ice if they had received the subliminal message related to the tea (Para 3-5).

Although it has been proven to work in some research, subliminal advertising's effectiveness is still uncertain. Charles Trappey (1996) conducted a meta-analysis of consumer choice and subliminal advertising. He combined 23 leading research studies that had tested the influence of subliminal advertising on consumer's choice. The results of his meta-analysis showed that subliminal advertising had a negligible effect on consumer's choice. Moreover, Saegert (1987) concluded that "marketing should quit giving subliminal advertising the benefit of the doubt," arguing that the influences of subliminal stimuli are usually so weak that they are normally overshadowed by the person's own decision making about the behavior (Stangor, 2012).

Furthermore, Stangor (2012) contends that taking the aforementioned researches together, one will observe that the evidence of the effectiveness of subliminal advertising is weak, and the latter effects may be limited to only some people and only under some conditions. However, "even if subliminal advertising is not all that effective itself, there are plenty of other indirect advertising techniques that are used and that do work. For instance, many ads for automobiles and alcoholic beverages are subtly sexualized, which encourages the consumer to indirectly (even if not subliminally) associate these products with sexuality" (Section 4.1, Para 19).

Kanner (1989) as cited by Broyles (2006) stated that "the advertising industry has repeatedly denied the use of subliminal embeds, and spokespersons within the industry have used such common-sense arguments against its probable use as: 'If subliminal worked, wouldn't there be textbooks on how to practice it?' and 'How can showing someone a penis get him or her to switch, say, from Kent (cigarettes) to Marlboro?'"

A study was conducted by Rogers and Seilers (1994); the results revealed that subliminal advertising is not being used by advertising practitioners. A survey of advertising agency members, their clients and media production professionals was conducted to discern

whether or not they have ever used, or have been connected with a firm that used, subliminal advertising. The study included 750 advertising industries and media representatives throughout the United States of America. The participants received a mail survey (p. 38). The results showed that the majority denied ever using this advertising strategy, despite the public's fears of this method of 'brainwashing' (p. 44).

Although advertisers deny the use of subliminal messages in their ads, a survey of 209 adults in Washington, D.C., conducted by Zanot, Pincus and Lamp (1983) found that 78% knew what subliminal advertising is, and that the respondents believed that subliminal advertising was widely used and helped in selling products. Moreover, the survey determined that there was a high correlation between the educational and the awareness of subliminal advertising: The more educated the respondents the more they are aware of the concept (p. 43).

According to Haberstroh (1994), subliminal advertising is a myth. He stated that there was no substantial proof that subliminal advertising existed or had effects on consumer's behavior or thinking. He asked why would any advertiser or ad agency use subliminal messages or think about it when researches had proven that subliminal advertising did not affect human behavior, advertising recall, or any other marketplace behavior. Haberstroh also mentioned that Wilson Key (1973) in his book "Subliminal Seduction" never proved the theory as to how subliminal images induce people to buy products.

### ?Subliminal Advertising in Practice

Despite advertisers' denial, many ads that people are exposed to contain hidden messages. Coca Cola ads are just a sample. Until today, they are using the same technique in their ads; for example, the Cola retro poster seen in Figure 1a which is the same as the Lebanese singer Nancy Ajram's ad depicted in Figure1b. It represents an example of a basic subliminal ad. This ad reflects the message that people who drink Coca Cola are young, sexy and attractive. Coca Cola advertisers are not telling the consumers to enjoy coke, but they want people to associate themselves with the referent singer's qualities. This is a silent implied form of communication. If a consumer considers himself / herself desirable, he/she will buy the advertised drink.

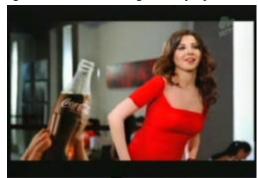
Another case of interest using subliminal messaging happened during the United States of America's presidential campaigns (Crowley, 2000). During a Republican-run television ad on prescription drugs, the announcer started by lauding George W. Bush's proposal for dealing with prescription drugs, and continued by criticizing the plan being offered by Vice President Al Gore. Fragments of the phrase "Bureaucrats decide" were run deriding the Democrat candidate Mr. Gore's proposal. Then, this phrase was programmed to dance around the screen. Then, if the viewer watched very closely, he would have discerned that something else was taking place: The word "rats", a fragment of the word "bureaucrats", was popping up in one frame. And though the image lasted only one thirtieth of a second, it couldn't be missed since it was written in huge white capital letters, larger than any other word on the commercial. The advertisement then declared, "The Gore prescription plan: bureaucrats decide."... See Figure 2.

Figure 1-a: Coca Cola ad



Source: Folievintage.fr (2012)

Figure 1-b: Lebanese Singer Nancy Ajarm's coke ad



Courtesy: Lebanese Broadcasting Corporation International (LBCI)

Figure 2: The US Republicans ad



Source: Boire, Richard Glen (2003).

Moreover, KFC in order to capture consumer's attention embedded a hidden message in its television spot. The commercial promoted the buffalo KFC Snackers sandwich and viewers were asked to guess the hidden word by watching the spot frame by frame and then to send it via Internet and win a 1 \$ coupon. Although this ad was considered creative and involved the engagement of the viewers, ABC television network refused to air it because of its subliminal nature (Isegoria, 2006).

The Federal Communications Commission officials claimed that their files on subliminal advertising are very thin. Although there are not any existing U.S. laws against subliminal advertising, the FCC considers that subliminal ads causes consumers to unconsciously select certain goods or services, or to alter their normal behavior, might constitute a deceptive or unfair practice" (Simpson, 1999).

Furthermore, another application is observed over the Internet. "A new form of spam uses a subliminal message to boost responses: it is an animated graphic that flashes the word 'BUY!' every 15 seconds. The graphic appears behind text urging investors to purchase a penny stock. The spam is a part of a pump –and dump scheme, in which hucksters promote a stock to inflate its price and then sell it off at a profit. Researches showed that stocks advertised in pump-and dump schemes became twice as popular in the days after an e-mail campaign" (Conry-Murray, 2006).

It is worth mentioning that Lowery, Eisenberger, Hardin & Sinclair (2006) believe that, "although marketers' claims regarding products that supposedly employ subliminal priming have not fared well in empirical tests, as many such claims have been debunked, there is quite a bit of evidence that subliminal priming can affect behavior. These effects have been observed on a variety of viewers' behaviors, including social cooperation, competitiveness, memory, hostility, and non-verbal demeanor"(p. 3).

Finally, as a summary, when speculating whether subliminal stimulation affects human behavior, we contend that some experiments suggest that it could. For example, the experiment made by Bargh, Chen and Burrows (1996) concluded that the unconscious have direct effect on behavior. Neuberg (1988), on the other hand, claimed that subliminally presented stimuli can influence behavior indirectly. While a study conducted by Trappey (1996) may lead to the conclusion that subliminal advertising has a little influence on the

consumer's decision to select between alternatives. However, one should consider that these experiments were made indoors and under controlled conditions, which we hardly find in reality and in practice.

# Research Design and Methodology

Subliminal marketing is not popular in Lebanon, and data are rare on this matter. However, many ads that are displayed on the screens of the Lebanese T.V. and the advertising billboards contain subliminal messages that have been gone unnoticed. Accordingly, the proposed study is needed to assess the Lebanese level of awareness, and their attitude toward the subject matter.

Accordingly, the objective of the current paper is to unveil and highlight the issue of subliminal marketing in Lebanon by assessing the extent of the awareness of the Lebanese consumers of this subject. In addition, the researchers intend to collect primary data related to this subject from the Lebanese experts. To add reality to the contents of this research, a sample of Lebanese respondents' comments on a selection of TV ads shall be evaluated. The aim of such evaluation is to point out ads that are thought to contain hidden messages according to the respondents' inputs.

This research is exploratory in nature and intends to discover marketers' and advertisers' ideas and insight of the subliminal concept and its application in Lebanon. Moreover, the research will assess a sample of respondents' awareness and attitudes toward the subject. Research tools utilized were: an in-depth interview with Lebanese marketers and advertisers and a survey questionnaire that targeted MBA students, who represent a sample of the Lebanese consumers. Results obtained from the distributed questionnaires were sorted and analyzed using Software Package for Social Science (SPSS) software.

# **Survey Design**

The survey tool is a questionnaire divided into four parts. The first part covers and assesses the general knowledge of the concept of subliminal messaging; it consists of six questions. The second part is concerned with respondents' attitudes toward a selection of Lebanese ads assumed to contain subliminal messages (respondents had to see the ad and respond); the third part is composed of six questions regarding ads' recall (here, respondents were exposed to four ads, then they were asked to figure out and interpret the hidden message in each); and, the fourth part contains eight demographic questions, including age, gender, marital status, address, education level, position and type of job.

## Lebanese ads used in the research

Galaxy ad, shown in Figure 3, is one of those containing a subliminal message. The ad contains many sexually-based hidden messages. At first, the ad shows an image of a man and a women making love as the chocolate stream is poured. Then, we see the image of a naked woman; and, finally one can observe the image of a male's sex organ.

Nescafe ad, depicted in Figure 4, is yet another ad that represents subliminal messages. At first, one may have the impression that he/she is going to watch a hot scene; however, within seconds, one notices that he/she is watching a Nescafe ad. The girl in the ad uses her tongue, insinuating an invitation to a sexual act; an act that is shown clearly within the said ad.

Another ad is the Euphoria ad as seen in Figure 5; one needs to look into the ad carefully to observe the image of a demon. If one concentrates further, one observes fire. In addition, one can notice a picture of a man taking off his clothes as well as the shadow of a naked man. Another image in the ad shows traces of a skeleton.

Coca Cola ads, referred to earlier, are good examples of subliminal ads. One can notice that the whole theme of the ad is the comparison between the shape of the classical coke bottle and the referent singer Nancy Ajram's figure (see Figure 6). Since Nancy is a

famous Lebanese celebrity singer, one can bring out an additional issue represented by the exploitation of celebrities.

Figure 3: The Galaxy chocolate ad (Courtesy Rotana Melody)











Figure 4: The Nescafe ad (Courtesy: Lebanese Broadcasting Corporation International (LBCI)



Figure 5: The Euphoria ad (Courtesy: Lebanese Broadcasting Corporation International (LBCI))  $\,$ 



Figure 6: The Lebanese singer Nancy Ajram's ad (Courtesy: Lebanese Broadcasting Corporation International (LBCI))



## **Interview Components**

The interview consists of twelve questions on the concept of subliminal messaging. The questions deal with the application of subliminal messages in Lebanon, celebrities' exploitation, and respondents' opinion on the subject.

# Sample Size

The survey questionnaires were distributed to 100 MBA students; the latter were conveniently chosen, and were from different Lebanese universities.

The exploratory research was conducted by interviewing three experts, marketing managers, brand managers, and advertisers in reputable companies and advertising agencies.

# Results Interviews

The target number of experts to be interviewed was ten, but the majority refused to participate for privacy reasons, leaving only three who were ready to cooperate. In addition, and to the surprise of the researchers, none of the advertising agencies responded; one of the

advertisers in the number two advertising agency in Lebanon showed complete ignorance about the whole concept of subliminal ads, and as such didn't cooperate.

On the other hand, upon analyzing the data gathered from two product managers (Abdo, Chadi: Brand Manager at Food and Drug Corporation (FDC), Verdun, Beirut, Lebanon (personal communication May 23, 2012) and Mazen Hatoum: Product Manager at Pepsi co. SMLC, Chouiefat, Lebanon (personal communication April 20, 2012) and one marketer (Pierre Carnaby: Deputy Head of Marketing Department at Bank of Beirut and the Arab Countries (BBAC), Beirut, Lebanon (personal communication May 7, 2012), it was found that all three agreed that Lebanese consumers have great interest in social status and upscale image. Moreover, they agreed that sex sells and that is why some advertisers use sex appeal in certain ads. Upon asking them if they agree that marketers and advertisers abuse customers, the responses were "no"; one of the respondents stated that as consumers and social requirements are changing, marketers and advertisers simply follow the observed social trend and take action to capitalize on their creativity to reach the consumers. The researchers realized that the interviewees did not believe that subliminal messages were used in the Lebanese ads; however, they all agreed that subliminal messages could be effective if used in ads and that such messages could be used to have high impact, attract more customers, or simply increase sales.

# Questionnaires: Results and Findings

Results show that only 21% of the respondents do not watch TV, 56% of the respondents give attention to ads, and 44% do not; a majority or 74 % of the respondents concentrate on selective ads. Furthermore, when respondents were asked if they were attracted to specific ads which were not on TV, 37 % of the sample answered in the affirmative, while 63% of the respondents did not pay attention to ads that were not on TV. Results also show that 47% of the respondents are familiar with the "subliminal" concept. In addition, 87% of the respondents are also familiar with the concept of "consciousness."

## Attitude toward Ads

While reporting results based on the 5-Likert scale style, the researchers opted to group the "strongly agree and agree" results into "Agree", and to group "strongly disagree and disagree" as "Disagree" for the sake of observing the categories in a clearer manner. Table 1 depicts the results of the statements, assessing respondents' attitudes toward ads.

Table 1: Respondents' attitudes toward ads

Statement	Agree,	Indifferent,	Disagree,
	%	%	%
I am attracted to ads	53	17	30
My motivation to buy has been boosted after observing the ads	37	21	42
Ads depicting females draw my attention	27	40	33
Ads depicting males draw my attention	15	42	43
Ads have double meaning	81	17	2
Celebrities' ads are more attractive	71	16	13
Seductive ads create uncomfortable feelings	25	27	48
Certain ads trigger different interpretations of the message	90	8	2
One buys more after watching specific ads	30	24	46
Sensual ads draw attention	57	22	21

According to Table 1, 53 % of the respondents agreed that they feel attracted to ads, 30% disagreed, while 17% showed indifference. Respondents showed a mixture of reactions to the fact that their motivation to buy certain products after observing an ad was boosted, that is, 37% agreed, 21% were indifferent, and the remaining 42% disagreed.

Table 1 also shows that only 27% of the respondents agreed that females' ads attract their attention, 33% disagreed, and 40 % of the students were indifferent. Also, 43% of the respondents disagreed that ads depicting males draw their attention, while 42% were indifferent, and 15% agreed. Moreover, 81% of the respondents agreed, 17% were indifferent, and only 1% disagreed that certain ads have double meaning. Furthermore, results show that 71% of the respondents agreed that celebrities' ads are more attractive, 16% were undecided and only 13% disagreed. Also, 48% of respondents disagreed with the statement that "Seductive ads create uncomfortable feelings" and only 25% agreed.

Moreover, 86 % of the respondents agreed that certain ads trigger different interpretations of the message, 12% were indifferent and only 2% disagreed. In addition, Table 1 shows that 46% of the respondents disagreed with the fact that they buy more after watching specific ads, while only 30% agreed. Finally, 57% of the respondents agreed that sensual ads draw attention, 22% are indifferent, and 21% disagreed.

#### Most Recalled Ad

The purpose of this question was to probe to what extent respondents were able to recall ads seen on TV. Recalling ads could be a possible factor for decisions to buy the advertised items. As depicted in Table 2, respondents were exposed to four different ads (shown at the end of this paper). 50% of the respondents recalled ad number 3 (Nescafe Ad), followed by 31% who recalled ad number 1 (Nancy's Ad), 12% recalled ad number 4 (Galaxy Ad), and only 7% recalled ad number 2 (Euphoria Ad).

			1
		Frequency	Percent
	Ad 1 Nancy's Coca Cola Ad	31	31.0
	Ad 2 Euphoria Ad	7	7.0
Valid	Ad 3 Nescafe Ad	50	50.0
	Ad 4 Galaxy Ad	12	12.0
	Total	100	100.0

Table 2: Most recalled ad

# Ad with Predetermined Knowledge

Respondents were probed about their knowledge of the ads, without any external explanation from the researcher (or predetermined knowledge). Table 3 shows that 55% of the respondents chose Nancy's Coca Cola ad as obvious and needed no external explanation, followed by 21% who chose the Nescafe ad (ad number 3). Ads 2 and 4 were classified in third place by an equal number of respondents, or 12 %. Moreover, when respondents were asked if they were able to figure out the inherent meaning of the ads, 84 % of the respondents confirmed the aforementioned fact.

Table 3: Ad with predetermined knowledge

		Frequency	Percent
	Ad 1 Nancy's Coca Cola Ad	55	55.0
	Ad 2 Euphoria Ad	12	12.0
Valid	Ad 3 Nescafe Ad	21	21.0
	Ad 4 Galaxy Ad	12	12.0
	Total	100	100.0

## The Most Recalled Ad Message

Table 4 shows that the most recalled ad message is the Nescafe Ad with 41.7%, followed by the Coca Cola Ad with 38.5%, the Galaxy Ad with 11.5%, and the Euphoria Ad with 8.1%.

Table 4: The Most Recalled Ad Message

		Frequency	Percent	Valid Percent
	Ad 1 Nancy's Coca Cola Ad	37	37.0	38.5
	Ad 2 Euphoria Ad	8	8.0	8.3
Valid	Ad 3 Nescafe Ad	40	40.0	41.7
	Ad 4 Galaxy Ad	11	11.0	11.5
	Total	96	96.0	100.0
Missing	System	4	4.0	
Total		100	100.0	

# Ability to Relate an Apparent Message to a Hidden One

70% of the respondents claimed to be able to relate an apparent message to a hidden one.

# Ability to Figure out the Hidden Message in Nancy Ajram's Cola Cola Ad

Table 5: Nancy Ajram's ad hidden message

Interpretation	Percentage, %	Missing, %
Nancy's body is like a Coke bottle	32	40
Beautiful curve	3	
Cheap	1	
Coca vs. fitness	1	
Cute	1	
Energy of drink	1	
Stars like Coke	5	
Life is fun with Coke	1	
Nancy's body image is in your hand when you drink Coke	5	
Sexual	10	

Table 5 shows that 60 respondents out of 100 were able to figure out and provide an interpretation of the hidden message in Nancy Ajram's Coca Cola ad. 32 % claimed that the singer's body has the profile of the Coca Cola bottle, 10% thought that her ad reflects sexual messages, and another 5% thought that handling the bottle is similar to handling the female's body. There were few other interpretations that related the ad to sports related advantages. It is worth mentioning that, on the average, one of the researchers was informed by many students that they were shy to express their thoughts about the subject, especially since sexual insinuation was part of the interpretation, so they preferred not to comment.

Ability to Figure out the Hidden Message in Euphoria Ad

Table 6: Euphoria message identification

Interpretation	Percentage, %	Missing, %
Devilish	9	63
Hallucination	2	
Mystery	2	
Not clear	8	
Power of odor	2	
Sexual	14	

As shown in Table 6, only 29% (out of 37 % who were able to figure out the ad) were able to identify a message in Euphoria ad where it was perceived as sexually oriented and with satanic features.

# Ability to Figure out the Hidden Message in the Nescafe Ad

Table 7: Nescafe message identification

Interpretation	Percentage, %	Missing, %
Seduction	32	41
Drinking Nescafe gives the same	1	
pleasure as thatof sex		
Excitement	1	
Funny	2	
Pleasure in having a Nescafe	2	
Nescafe is tasty	4	
Sexual	17	

Table 7 shows that 59 % of the respondents figured out the message behind the Nescafe ad. 32% stated that it is a seductive ad, and 17% identified the hidden message as a sexual massage.

### Ability to Figure out the Hidden Message in Galaxy Ad

Table 8: Galaxy message identification

Interpretation	Percentage, %	Missing, %
Build the bones	1	38
Chocolate	1	
Chocolate is delicious like a woman's body	3	
Chocolate's shape is like that of a woman	5	
Enjoyment	1	
Hot	3	
Male's sexual organ	7	
None	1	
Oscar trophy	1	
Pleasure	1	
Powerful	1	
Seductive	12	
Sexual	23	
Smooth	1	
Stinky	1	

Table 8 shows that the Galaxy hidden message is identified as sexual and seductive (35%). Moreover, some respondents went further in their descriptions by recognizing the images of the male's sexual organ and the woman's body (15%).

## Respondents' demographics

Findings show that respondents are 46% males and 54% females. 63% live in the capital Beirut and 37% live either in the suburbs or other regions. 71% of the respondents are in the age range between 20 and 30 years, 14% of the respondents are 31 to 35 years old, and 6% are 36 to over 41 years old. The average respondents' age is 25 years. Also, 67% of the respondents are single, 20% are married, and 4% are divorced or widowed.

Research results show that all of the respondents are MBA students. They all work and have experience in all production and commercial sectors of Lebanon, but the grand majority belong to the service sector: 23% of the respondents hold managerial positions, 20% are supervisors and 57% are employees. Finally, 33% of the respondents earn a yearly income of \$5000 USD or less, 33% earn between \$5,000 and \$10,000, 19% earn between \$10,000 and \$15,000, and only 15% have an income higher than \$15000.

# Summary: Respondents' attitude towards ads

Table 9 Mean average attitudes towards ads (each statement is evaluated using the following scale: 5: Strongly Agree; 4: Agree; 3: Uncertain; 2: Disagree; and 1: Strongly Disagree).

Statement	Mean
Certain ads have double meaning	4.06
Certain ads trigger different interpretation of the message	3.90
Ads with celebrities are more attractive	3.79
Ads with sensual content draw my attention	3.39
I am attracted toads	3.22
Ads with females draw my attention	2.91
My motivation to buy certain items is boosted after observing an ad	2.87
I am uncomfortable with seductive ads	2.75
I buy more after watching specific ads.	2.75
Ads with males draw my attention	2.56

Table 9 shows the mean averages of ten different statements designed to reflect the respondents' attitude towards subliminal marketing, using a selection of ads. Results are sorted in a decreasing order to emphasize the respondents' attitude towards the different statements in accordance with the subjects' interpretation of ads and their ability to identify subliminal messages. Results of the first five statements are of special interest since their mean average is greater than 3.2

Table 9 shows that respondents' belief that ads have double meanings (mean 4.06); certain ads trigger different interpretation of the message (3.90); ads with celebrities are attractive (3.79); ads with sensual content draw attention (3.39); and, the attraction to ads (3.22). The remaining statements show that the respondents are indifferent to seductive ads. The latter result could probably mean two things, either the respondents are comfortable and they believe in subliminal messages and they don't feel offended if exposed to ads with sexual content, or simply they are shy to openly express their real opinion about the issue and had chosen to select the neutral response to the different statements.

### **Conclusion and Recommendations**

Subliminal stimulation is a controversial issue as to whether it is effective or not; it was important to highlight this concept and cover its perception in Lebanon. Subliminal perception is receiving a stimulus below the level of awareness. It is believed that subliminal messages are basically used in ads to affect and lead the consumers' buying decision (Benady, 2003). Many ads contain subliminal messages, although marketers and advertisers deny its usage, and many claim that it is a myth (Haberstroh, 1994).

The effectiveness of subliminal messages used in ads on consumers' behavior is still not substantiated with parametric research (Trappey, 1996 & Stangor, 2012). However, the idea was worth studying in the current research because while we are anxious, as consumers, to spend our money, psychoanalysts, marketers and advertisers are continuously trying to assess the venue to be followed in stimulating the spending of our money. Moreover, the marketing teams deal with the consumers as if they are under an experiment. They are studying consumers' reactions to their products; even to the extent of studying the blinks of the consumers' eyes, which are assessed to determine what motivates the consumers and how they can influence the latter spending process. Nonetheless, the claim that unconscious people are able to recall events supports the idea of subliminal perception (Hasher and Zacks, 1984; Bargh, Chen and Burrows (1996) & Merikle, 1998).

Despite the marketers' and advertisers' denial of the existence of subliminal messages (Lowery, Eisenberger, Hardin & Sinclair, 2006), these are used in ads, and some of them are highlighted in this manuscript. Subliminal messages are considered unethical and deceptive and the simple act of confessing that these are used shows incredibility.

In Lebanon, marketers didn't agree that subliminal messages are used, but they believe that sex sells, and that many sensual ads are encountered. Moreover, they believe that subliminal messages could be effective.

According to the exploratory study that was undertaken, we can answer the following research questions:

- 1. How aware are Lebanese respondents of subliminal messages?
- 2.To what extent Lebanese respondents are stimulated to buy after observing marketing ads?
- 3.To what extent are Lebanese respondents aware of ads?
- 4. What factors may influence Lebanese respondents to give their real interpretation of the TV ads?

The answers to the aforementioned questions are as follow: the current research concludes that 47% of the respondents, who are MBA students, are not familiar with the subliminal concept, which means that this concept is not widely known in Lebanon. Only 30% of the respondents are stimulated to buy after watching specific ads, although 74% of the

respondents concentrate on selective ads. Moreover, 63% of the respondents do not pay attention to ads away from TV, a fact that may impact their attention to the specific messages within the ad. Therefore, results show that 46% of the respondents disagreed with the notion that they buy more after watching ads, 57% agreed that sensual ads draw their attention; consequently, 81% of the respondents recalled the most obvious sensual ads (Nescafe's and Nancy Ajram's ads).

The aforementioned questions 2 and 3 are interpreted as follows: many of the respondents (40 - 60%), who recognized the ads, were not able to identify the hidden messages of the ads, and some were shy to express their specific ideas due to the sexual context of the ads. Although the Lebanese culture allows chatting using sexual expressions in secret, many avoid expressing their ideas about these issues in public. According to our study, many believe in the presence of subliminal messages and they don't feel offended if exposed to ads with sexual content (17 - 35%), on the contrary, they found these ads funny and amusing. These results match what was noted by Krugman (1972, 1977) who argued that recognition may be a more appropriate method for examining ad effects than recall.

Another issue to tackle here is the issue of celebrities' exploitation. For instance, Coca Cola ads present the well known Lebanese singer "Nancy Ajram" as "Marlene Monroe" –the well known American Actress. The presentation of the ad depicts the Lebanese singer with the same behavior of the American actress. The intended context for the public is to perceive "Ajram" as a sex symbol (50% of the respondents did agree).

# **Implications and Recommendation**

The concept of subliminal advertising or messaging should not go unnoticed in Lebanon. Many ads that are played on the Lebanese TV screen include subliminal messages; mainly, they insinuate sensual messages. There should be public awareness of subliminal messages. The act of imposing these messages using referent figures like "Ajram" should be perceived as unethical, deceptive and offensive.

In the absence of a Lebanese law that forbids subliminal messages, we will come upon more subliminal ads which will be ignored, since no one is pointing out the issue, and viewers find them funny. There should be a clear Lebanese law that regulates using this kind of messages in ads or playing ads that constitute subliminal messages.

One may assume that legal actions will never be taken since the whole issue is beneficial to advertisers as well as to the large corporations using such messages. It is worth mentioning that many Lebanese advertisers were approached for an interview to comment on subliminal messaging but they were highly not cooperative. Some claimed not to have any clue about the concept, others simply refused to participate.

One major recommendation of this research is to create awareness in the educational institutions, where such topics appear in the text books or case studies under diverse topics.

Finally, several insights may be drawn from the current research. This research serves as an eye opener to Lebanese consumers, in particular, because of its informative content and to Lebanese, Arab, or foreign researchers, in general, because it stimulate them to carry out further researches in their respective communities and countries. Although, the available literature about subliminal messages and advertising is rare in the Arab region, the opportunities to enrich the know-how in this field abound.

Furthermore, our experience and findings in the subliminal advertising research match the findings reported by many western researchers, which are best manifested by Epley, Savitsky and Kadelshi (1999) who contended that "we offer no conclusion, regarding the plausibility or effectiveness of subliminal advertising, we only suggest that it may, in fact, be possible, and vendors should acquaint themselves with respect empirical research" (pp. 44-45).

Another insight that is considered important for the current research is the research's academic contribution to the minimal literature found on the subject in Lebanon. At the same

time we must acknowledge that extensive research applied to other countries of the region are far from comprehensive.

### **Future Research**

One limitation to the current research is that it cannot be generalized until further research work is completed. This research was more of an exploratory study. The literature dealing with subliminal messages is limited. The subject is highly controversial in such a way that researchers are in doubt of its existence; there are few professional studies that deal with contemporary advertising using subliminal messaging. Therefore, more studies should be made to include a larger sample of respondents, advertisers, and a larger number of marketers in order to have a wider scope. Furthermore, research should include cross-cultural comparisons in the Arab region to draw attention to the impact of hidden messages in a community that is highly conservative.

The authors would like to acknowledge the constructive criticism and editing performed by Mrs. Henriette Skaff, senior editor at AUST's Publications Department.

### References

Arndorfer, James B., Atkinson, Claire, Bulik, Beth Snyder, McDonough, John and Oser, Kris (2005, March). 75 Years of Ideas. Retrieved March 20, 2013, from http://adage.com/article/news/75-years-ideas/102535/

Aylesworth, A., Goodstein, R. and Kalra, A. (1999). Effect of archetypal embeds on feelings: An indirect route to affecting attitudes? *Journal of Advertising*, 28(3):73-82.

Bargh, J.A., Chen, M. & Burrows, L. (1996). The Automaticity of Social Behaviour: Direct effects of trait concept and stereotype activation on action. *Journal of Personality and Social Psychology*, 71, 230-244.

Bargh, J. A. (2002), "Losing Consciousness: Automatic Influences on Consumer Judgment, Behavior, and Motivation," *Journal of Consumer Research*, 29 (2): 280-5.

<u>Benady</u>, David (2003, September). We have ways of making you think: the similarity between Louise's new single and the jingle in the Asda ads is causing controversy over the use of subliminal advertising. *Marketing Week*, September, p. 14.

Berger, Aurthur Asa (2012). *Media Analysis Techniques* (4th edition), Thousand Oaks, CA: Sage Publications Inc.

Blackwell, Kristen and Halasz, Andrew (2009). Subliminal Advertising: Is The Debate Over? *The Australian Journal of Business and Informatics*, 4(1). Retrieved December 12, 2012, from http://dlibrary.acu.edu.au/research/carpediem/pages/vol3no1\_paper1.htm

Boire, Richard Glen (2003). Laced Media. The Journal of Cognitive Liberties. 1 (Fall): 72-76

Broyles, S. (2006). Subliminal Advertising and the Perpetual Popularity of Playing to People's Paranoia. *The Journal of Consumer Affairs*, 40(2): 392-407

CliffsNotes.com (2013). Neural Transmission. Retrieved March 4, 2013, from http://www.cliffsnotes.com/study\_guide/topicArticleId-25438,articleId-25314.html.

Conry-Murray, Andrew (2006, September). *BuzzBites: Hypno-Spam; Rebuilding the Bombe*. Retrieved May 12, 2008 from:

http://www.networkcomputing.com/channels/security/showArticle.jhtml?articleID=19300386

Crowley, Candy (2000, September 12). Bush says RATS ad not meant to contain subliminal messages. Retrieved from Subliminal Messages.com website: http://www.subliminalmessages.com/vip/settlement\_19.htm

Dixon, Norman F. (1971). Subliminal Perception: The Nature of a Controversy, London, England: McGraw-Hill Publishing Company Ltd.

Dixon, Norman F. (1981). Preconscious Processing. New York: John Wiley & Sons.

Doyen, Stéphane, Klein, Olivier, Pichon, Cora-Lise and Cleeremans, Axel (2012). Behavioral Priming: It's All in the Mind, but Whose Mind? *PLoS ONE* 7(1): e29081. doi:10.1371/journal.pone.0029081

Epley, Nicholas, Savitsky, Kenneth & Kadelski, Robert A. (1999). What every skeptic should know about subliminal persuasion. *Skeptical Inquirer*, September/October: 40-58.

Folievintage.fr (2012). Coke Ad. Retrieved March 24, 2013, from http://www.folievintage.fr/annees20-etmoins/coke-anytime-anywhere/

Haberstroh, Jack (1994). *Ice Cube Sex: The Truth About Subliminal Advertising*. Notre Dame, IN: Cross Cultural Publications.

Hasher, L., & Zacks, R. T. (1984). Automatic processing of fundamental information: The case of frequency of occurrence. *American Psychologist*, 39, 1372-1388.

Isegoria.net (2006, March 20). <u>KFC Seems to Win Game of Chicken. Retrieved November 23, 2012 from Isegoria Website: http://www.isegoria.net/2006/03/kfc-seems-to-win-game-of-chicken.htm</u>

Krugman, Herbert E. (1972, December). Why Three Exposures May Be Enough, *Journal of Advertising Research*, 12 (December), 11-14.

Krugman, Herbert E. (1977, August). Memory Without Recall, Exposure Without Perception, *Journal of Advertising Research*, 17 (August, 1977), 7-12.

Leibniz, G. W. (1981). *New essays on human understanding*. Translated and edited by P. Remnant & J. Bennett. Cambridge: Cambridge University Press.

Lowery, Brian S., Eisenberger, Naomi I., Hardin, Curtis D. & Sinclair, Stacey (2006, September). *Long-term Effects of Subliminal Priming on Academic Performance*. (Research paper No. 1946), Graduate School of Business, Stanford University.

Merikle, P.M. (1998). Psychological Investigations of unconscious perception. *Journal of Consciousness Studies*, 5:5-18.

Merikle, P.M., & Daneman, M. (1998). Psychological investigations of unconscious perception. *Journal of Consciousness Studies*, 5, 5-8.

Merikle, Philip M. (2000). Subliminal Perception, from A. E. Kazdin (Ed.), *Encyclopedia of Psychology*, 7, (pp. 497-499). New York: Oxford University Press.

Motluk, A. (2006). *Subliminal Advertising May Work After All*. Retrieved March 11, 2013, from http://www.mindpowernews.com/SubliminalAdsWork.htm

Nerwith, Joseph (2003). Between Emotion and Cognition .Other press New York

Neuberg, S. L. (1988). Behavioral implications of information presented outside conscious awareness: The effect of subliminal presentation of trait information on behavior in the Prisoner's Dilemma game. *Social Cognition*, 6, 207-230.

Nisbett, R. & Wilson, T.D. (1977). Telling more than we can know. Verbal reports on mental processes. *Psychological Review*, 84: 231-254.

Packard, Vance (1957). The Hidden Persuaders. New York: David McKay INC.

Peretti, P. & Jong, K. (1996). Subliminal perception of number stimuli. *Education*. 116(3): 410-414.

Rogers, M. & Seiler, C. (1994). The answer is no: a national survey of advertising industry – practitioners and their clients about whether they use subliminal advertising. *Journal of Advertising Research*, 34(2):36-46.

Saegert, J. (1987). Why marketing should quit giving subliminal advertising the benefit of the doubt. *Psychology and Marketing*, 4(2), 107–120.

Simpson, Glenn (1999, December 9). Tracking Web Habits Recalls Subliminal Ads. *Gemstone Forecaster*, 17(4).

Stangor, Charles (2012). *Sensing and Perceiving*, chapter 4 from the book Introduction to Psychology (v. 1.0). Retrieved March 11, from http://flatworldknowledge.lardbucket.org/books/introduction-to-psychology/section\_08.html

Trappey, C. (1996). A Meta –Analysis of Consumer Choice and Subliminal Advertising. *Psychology and Marketing*, *13*(5): 517.

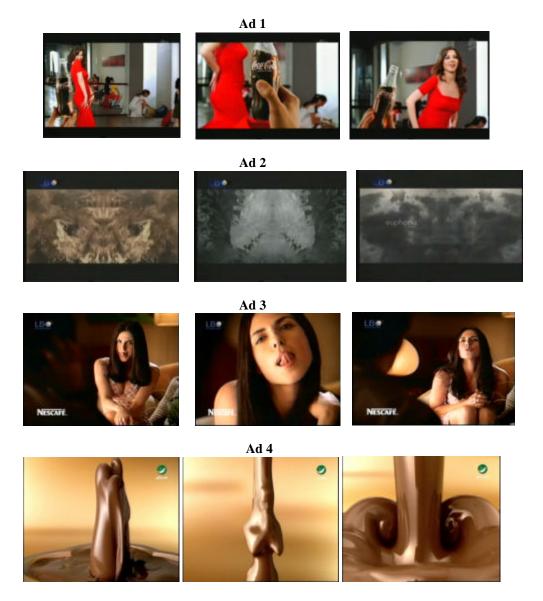
Whitlow, Bill (2004). Psychophysics. Download presentation source. (Draft of February 24, 2004, Chapter 6, Sensitivity and Psychophysical Methods). Retrieved February 28, 2013, from http://www.camden.rutgers.edu/~bwhitlow/Courses/PsychophysicsS04

Wilfong, Jamie Lynne (2002). *The Effects of Subliminal Messages in Print Advertisements*. (Undergraduate Honors Thesis Collection). College of Business Administration and The Honors Program of Butler University.

Wittrock, M.C. (1980). The Brain and Psychology. Academic Press

Zanot, Eric J., Pincus, J. David and Lamp. E. Joseph (1983). Public Perceptions of Subliminal Advertising. *Journal of Advertising*, *12*(1): 39-45.

Courtesy: Lebanese Broadcasting International (LBCI), Beirut-Lebanon.



About the Author(s)
HUSSIN HEJASE<sup>1</sup>, BASSAM HAMDAR<sup>1</sup>, GEORGE FARHA<sup>2</sup>, ROULA BOUDIAB<sup>1</sup>
FACULTY OF BUSINESS AND ECONOMICS,

<sup>2</sup>FACULTY OF ARTS AND SCIENCES

AMERICAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, BEIRUT, LEBANON NOURI BEYRUTI

SCHOOL OF BUSINESS, LEBANESE AMERICAN UNIVERSITY, BEIRUT, LEBANON

### Xxxxxxxxxxxxxxxxxxx