

EXPLORING REACTION TO SUBLIMINAL CODES IN PRINT ADVERTISING

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ABSTRACT

Advertising is a huge industry and has a perpetual influence on any economy. Although visual communication lies at the core of advertising effectiveness, the power of visual communication does not nearly receive the attention it deserves. One of the more controversial areas of visual communication in advertising is called subliminal advertising. In subliminal advertising, covert visual messages/images are used to communicate with the audience. This type of communication occurs below the threshold of an individual's awareness. However, the question whether subliminal signs do communicate or persuade has been debated for several decades. In this study, eye-tracking research was combined with qualitative research to determine the reaction of individuals when being exposed to print advertisements containing subliminal embeds. The study did not aim to explain if, how or why this subliminal embeds might work or not; only whether they can be seen. According to the results, subliminal embeds in print advertising can only be seen once pointed out to the respondents. However, a large number of respondents' eye-gaze were fixed on the subliminal embeds, even though they did not report seeing it.

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INTRODUCTION

Visual imagery has potentially powerful effects on human psychology and physiology, affecting ideas, perceptions, beliefs, feelings, behaviour and health (Branthwaite 2002: 164). Branthwaite opines that visual imagery plays a central role in most advertising, especially print and television. Arens (1999) describes advertising as communication – a special kind of communication that aims to persuade people to act/react in a certain manner, whether it is to acknowledge a product or service, to make use of a product or service, or even to be informed about a product or service. Undoubtedly, whether one believes that advertising is a highly persuasive force (according to the strong theory of advertising), or more of a “gentle nudge” (the weak theory of advertising), it has some effect on potential consumers (Egan 2009: 384).

According to Lindstrom (2008: 3) advertising’s effect is mainly based on emotions. Emotional appeals target the consumer’s psychological, social, or symbolic needs (Arens 1999: 247). It is suggested that activated emotions enhance advertising effectiveness (Dahlen, Lange & Smith 2010: 349). According to Lindstrom (2008: 3) emotions are mainly awakened in the subconscious. Dahlen *et al.* (2010: 348) suggest that subliminal perception occurs below the limit of an individual’s conscious awareness. These authors argue that even though an individual’s consciousness does not see it, it still enters the mind and affect the individual.

According to Haberstroh (1994: 83) subliminal advertising entails a signal or message embedded in another medium designed to pass below the normal limits of the human mind’s perception. These messages are unrecognisable by the conscious mind, but in certain situations can affect the subconscious mind and more importantly, the unconscious mind and can negatively or positively influence subsequent later thoughts, behaviour, actions, attitudes, belief systems and value systems. The term *subliminal* means “beneath a limen” also known as sensory threshold. This is from the Latin words *sub*, meaning under, and *limen*, meaning threshold (Haberstroh 1994: 83). Trappey (1996: 517) argues that subliminal advertising is “a technique of exposing consumers to product pictures, brand names, or other marketing stimuli without the consumers having conscious awareness. Once exposed to a subliminal marketing stimulus, the consumer is believed to decode the information and act upon it without being able to acknowledge a communication source.” From this argument it could be gathered that subliminal advertising could play a big, yet unappreciated role in advertising.

The fact that some advertising aims to reach consumers’ minds below the level of their consciousness has long been debated. Since 1957 when Vicary claimed to increase sales in a movie theatre through the tachistoscopic presentation of the phrases “eat popcorn” and “drink Coca-Cola”, people have been captivated by the concept of the subliminal (Lindstrom 2008: 68). Researchers conducted studies to see how many people actually believe in subliminal messages, and the results were “...unfortunately most Americans!” (Haberstroh 1994: 101). Furthermore, these studies found that most Americans think subliminal advertising can get them to buy products they don’t even want to buy. Response Analysis found that a considerable number of American adults

(62%) think subliminal messages are constantly and deliberately embedded in the nation's advertising (Haberstroh 1994: 101).

Even though advertisers and researchers disagree on the effectiveness of subliminal advertising, with the majority of the opinion that subliminal advertising does not work, Rogers and Smith (in Haberstroh 1994: 83) concluded:

...marketers must be concerned about public attitudes toward subliminal advertising. It is not enough for advertising professionals to agree among themselves that subliminal advertising doesn't work... Even if consumers' beliefs about subliminal advertising are inaccurate, it is nevertheless these beliefs that help shape consumer reactions toward ads and attitudes about the advertising industry.

According to Zanot, Pincus and Lamp (1983: 40) people do not act on reality, but rather on their own perceptions of reality. Haberstroh (1994: 27) also finds that things pass for what they seem, not for what they are. Thus, whether or not the subliminal codes that are embedded in print advertising have an effect on behaviour or not, it might be valuable to determine if, when and how these subliminal codes in print advertising are noticed. This study therefore aimed to determine whether first-year marketing communication students notice subliminal codes in print advertising.

A BRIEF HISTORY OF RESEARCH ON THE SUBLIMINAL

In the 1930s and 1940s researchers addressed the question: "Can subliminally presented stimuli be discriminated?" Studies have indicated that subliminal stimuli could be discriminated and that this ability increased as intensity of the stimulus increased. By the end of 1940 studies attempted to classically condition responses to subliminal stimuli, but multiple methodological problems were raised. During the period 1957 to 1988 over 140 articles have appeared on the topic of subliminal persuasion (Pratkanis & Greenwald 1988: 338).

James Vicary, a market researcher who is famous for coining the term *subliminal advertising*, was the reason for this sudden popular topic (Lindstrom 2008: 68). In 1957 he claimed that quickly flashing messages on a movie screen had influenced people to purchase more food and drinks. Vicary claimed that he flashed the words "drink Coca-Cola" and "eat popcorn" for duration of $\frac{1}{3000}$ of a second onscreen every five seconds during the movie *Picnic*. He claimed that it resulted in an 18.1% increase in Coca-Cola sales and a 57.8% increase in popcorn purchases. Wilson Bryant Key further fuelled the fire with his books claiming that subliminal advertising was indeed manipulating consumer behaviour (O'Guinn, Allen & Semenik 2009: 123). It was later revealed that Vicary lied about the experiment and that he had falsified his data (Haberstroh 1994: 9).

After extensive reviews of the topic, several authors (cf. Saegart 1979; Moore 1988; Haberstroh 1994) concluded that there was no evidence to support the fact that subliminal messages can affect consumers' motivations, perceptions, or attitudes. Nonetheless, this topic touched a nerve in the American public. *Newsday* called the t-scope "the most alarming invention since the atomic bomb!" *The New Yorker* claimed that the minds of

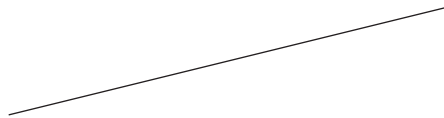
Americans had been “broken and entered”. This evoked interest amongst many researchers (Synodinos 1988: 157). In the 2000 Bush-Gore presidential campaign, the Republicans were accused of subliminally implanting the word *rats* into advertisements to attach the meaning to Al Gore (Belch & Belch 2009: 123). According to Bullock (2004) subliminal messages are all around, but society is reluctant to acknowledge that its pervasiveness poses a threat and/or is in denial. O’Guinn *et al.* (2009: 89) argue that with regards to “subliminal advertising” research have shown that while subliminal communication is possible, subliminal persuasion in the typical real-world environment remains all but impossible. The interest in and controversy surrounding the topic continues.

SUBLIMINAL EMBEDS AS PERSUASIVE TECHNIQUE

Advertisers have to work hard for the attention of viewers; therefore they try to grab a viewer’s attention by provoking an emotional response (Hyman & Tansey 1990: 106). Subliminal advertising aims to provoke emotions. According to Trappey (1996: 517) once exposed to a subliminal marketing stimulus, the consumer is believed to decode the information and act upon it without being able to acknowledge a communication source. Lindstrom (2008: 76) even stated that subliminal messaging influences how much consumers are willing to pay for a product. Hawkins (in Beatty & Hawkins 1989: 4) supports the view that subliminal advertising is a persuasive advertising technique. His 1970 study is still used as an important source of evidence that subliminal messages can affect behaviour. According to Cheskin (1958: 19) communication is not always on a conscious level. He alleges to have enough evidence to claim that most perception is below the threshold of consciousness. According to him, subliminal perception plays a vital role in the distribution of consumer goods, particularly in the advertising field. He highlights brand identity that is built in the consumer’s mind by means of advertising and publicity.

The Hawkins study (Beatty & Hawkins 1989: 5) concluded two important findings, namely 1) it appears that individuals do have the ability to perceive stimuli at a subliminal or unconscious level; and 2) physiological drives such as hunger and sex may be aroused by the use of subliminal stimuli. It is clear that this type of communication aims to influence the consumer’s behaviour. It is therefore argued that subliminal techniques are used as a form of persuasive communication.

When looking at subliminal advertising an advertiser not only looks at the illustration itself, but is more interested in the effect of the picture, which may be something totally different from one’s logical assumption. “[P]eople react to images as automatically (and analytically) as a small child to a piece of candy” (Baker 1961: 45). This author states that seeing is a state of mind, it is more than the process of receiving messages. A variety of responses accompany recognition of an object. Look at the following line:



Most people will agree that this line is going upward. This is because most people are conditioned to read from left to right. We interpret visuals according to what is locked in our subconscious. This is why subliminal advertising is the key to unlocking what Lindstrom (2008: 3) calls our “buyology – the subconscious thoughts, feelings, and desires that drive the purchasing decisions we make each and every day of our lives”. To protect the brain from sensory overload, our perceptual defence mechanism distinguishes every perception into figure (foreground and the subject) and ground (the background and environment). We consciously notice the figure, while the ground floats around it unless something there brings it to the foreground (Lechner 1998). The following example is not an absolute example of a subliminal embed, but a perfect illustration of how your focus need to shift from one to the other. You see one thing, yet, while noticing another set of features, you see something else. Advertisers take advantage of this to paint subliminal messages into the picture’s background.

FIGURE 1: ADVERTISING/SUBLIMINAL



(Source: Lechner 1998)

In the example in figure 1 the brain switches from the word “advertising” to “subliminal”. One sees the word “advertising” in big red letters. Once you see the words “subliminal” in the background, you cannot stop noticing them. It is clear that you cannot pay attention to both illusions at the same time. You have to keep shifting your attention back and forth between the two. Advertisements are carefully designed to manipulate your attention (and memory) the same way (Nelson 2008: 113).

According to the *Oxford Advanced Learner’s Dictionary* (2005: 1085) “persuasive” is defined as “able to persuade somebody to do something or to believe something”. Persuasive communication is therefore any communication which aims to persuade someone to do or believe something. De Wet (2010: 3) opines that persuasion predominates in our life-worlds. He considers persuasion as both an art and science. This author considers persuasion an art insofar as it deals with the capability of persuading someone and because probabilities are involved. However, persuasion is also considered a science as it relies on theories to explain why people may be persuaded by a communicator. According to Klass (1985: 146) subliminal stimuli is defined as “... messages or forces that can reach into one’s unconscious mind to influence his behavior...”. While numerous studies conclude that subliminal advertising does have an effect on consumer behaviour, many other studies contradict this view. Nevertheless, it is still widely discussed as a method of persuasive communication.

SUBLIMINAL ADVERTISING IN PRINT MEDIA

Earlier studies on subliminal advertising embeds have used subliminal presentations below the threshold for perception mostly through the flashing of material on a screen. Over the years, however, the definition of subliminal presentation has expanded to include the hiding of pictures and/or words within other visual material (Rosen & Singh 1992: 158). Theus (1994: 282) noted that subliminal codes can be found in media such as print, film, video, and other visual stimuli, but that subliminal visual stimuli appear to have a much higher probability of being cognitively processed by subjects than do auditory stimuli.

Kelly (1979:20) documented evidence that subliminal stimulation is being carried out through magazine advertising. This technique is known as subliminal embedding where erotic, death and other symbols are hidden in the advertising illustration. Rosen and Singh (1992: 159) argue that these subliminal embeds are usually clearly visible once pointed out, but otherwise remain unnoticed by those who view the presented material. Embeds mean “to fix something firmly into a substance or solid object, to place a sentence inside another sentence” (*Oxford Advanced Learner’s Dictionary* 2005: 476). According to Rosen and Singh (1992: 159) embeds fall into a no-awareness category, but they are consciously perceivable if pointed out to those observing the presentation. These embeds are presented visually and are often interpreted by viewers as part of a shadow, reflection, or other image common to the pictorial presentation. A single word is well known to be embedded in a print advertisement. Rosen and Singh (1992:476) argue that embeds are part of the background or setting in an advertisement with one important difference: While other background information is clearly discernable to any attentive viewer, embeds are deliberately hidden in such a way that they can be spotted only when pointed out.

HOW TO SPOT THE SUBLIMINAL IN A PRINT ADVERTISEMENT

In a study done by Kelly (1979: 20) he concluded that people can find these subliminal embeds when told how to see them. If they then believe they see these things, for them they are there. How can one then claim that these images don’t exist? Therefore if the claim is made that advertisers are embedding images in order to stimulate our subconscious, it is difficult to disprove. But how are these embeds placed in a print advertisement, and how can one spot them?

Key (in Lechnar 1998) writes: “Embeds enhance perceptual experience of the picture... Emotionalised, repressed information remains in the memory system for long periods, perhaps for a lifetime.” Gable, Wilkens, Harris and Feinberg (1987: 27) describe the procedure of embedding in print as words, symbols or the combination thereof that has been airbrushed into the advertisement. The photographs/pictures in the advertisements have been airbrushed with sexual or other stimuli and embedded in ambiguous portions of the advertisements. Krugman (in Rosen & Singh 1992: 159) refers to the process where the consumer is subliminally involved as “peripheral seeing”. This means seeing without “looking at” and without being aware that seeing has occurred. Graphic design artists have enough tools to expertly embed subliminal messages into their pictures (Lechnar 1998).

Theus (1994: 271) describes a series of steps on how to identify the subliminal embed in a print advertisement. First, the advertisement should be read like a book. One should not just glance over the advertisement, but read it from left to right and top to bottom. Next, one should look for anything out of place in the advertisement, any unusual shapes used in the advertisement. The advertisement should not be studied too intently, as one can miss the subliminal part of the advertisement. After all, the subliminal advertisement is intended to affect the person who only glances at the advertisement.

There is an excess of symbolic imagery that advertisers take advantage of. Advertisers often use lemons and oranges to portray fertility and women. These symbolic images can present a seemingly harmless advertisement, while entrenching your subconscious mind with deeper meanings (Lechnar 1998). One also needs to look at what first draws the attention to the advertisement, because subliminal advertisements are intended to affect the person who only glances at the advertisement. After this, the advertisement should be re-read but in reverse. It should be scanned from right to left and bottom to top as this may help reveal the backwards words. By far the most commonly embedded image is the word SEX (Lechnar 1998). The advertisement should therefore be studied from different angles. Finally one needs to look at the advertisement upside down. A change in perception can sometimes reveal a subliminal advertisement (Theus 1994: 271).

In 1990 Pepsi withdrew one of its “Cool Can” designs after someone protested that Pepsi was subliminally manipulating people by designing the cans in such a way that when six-packs were stacked at grocery stores, the word SEX would emerge from the seemingly random design (Lindstrom 2008: 72).

FIGURE 2: THE PEPSI COOL CAN



Again, this example (figure 2) is only to show that these subliminal embeds exist in print, and can most often be seen only once pointed out.

RESEARCH METHODOLOGY

As stated before, the aim of this study was to explore first-year marketing communication students at the University of the Free State's perceptions and awareness of subliminal codes in print advertising. The hypothesis which this study aimed to contradict or confirm was: *Subliminal advertising in print media can only be seen once pointed out.*

A combined quantitative and qualitative research methodology was employed in this study. In the quantitative approach, questionnaires and the Tobii T120 Eye-tracker together with Tobii Studio 1.5.0 software, and a Logitech webcam were used. With the Tobii Eye-tracker, eye position and gaze direction are estimated using information from an image sensor/sensors picking up reflection patterns on the cornea and other information points. Together with very sophisticated image analysis and mathematics, a gaze point on a reference plane can be calculated. With this eye-tracking technology, a computer knows exactly where a user is looking.

With the quantitative approach the questions in the questionnaire were standardised and all students were asked the same questions. Descriptive surveys were used together with the Tobii T120 Eye-tracking device to verify the information captured. A structured interview then followed, divided into Phase A and Phase B. Phase A interviews were conducted during the Tobii Eye-tracking study. The structured interview followed and then, to conclude the data-collection, Phase B was completed on the questionnaire. Phase B contained five important multiple choice questions to verify the hypothesis. At this stage, the subliminal embeds were pointed out to the respondents, which indicated whether or not the respondents saw these embeds once pointed out. The respondents' eye-movement on the advertisement were tracked at all times. This information was then compared with the information gathered from the questionnaire and interview. Thus, if a respondent focused on the subliminal embeds while observing the advertisement it was compared to the information gathered from the questionnaire and interview to determine whether they actually saw what they were looking at.

A webcam and microphone were utilised to capture respondents' eye-movement, self-talk and facial expressions while the respondents were being exposed to five pre-selected print advertisements (in digital format) that contain subliminal embeds. Integrated video recordings that consist of the user's eye-gaze, facial expression and voice were made. Tobii Eye-tracker was used to capture eye fixation and to produce "heat maps" (hot spots) to show the percentage of users who looked at a specific point in the advertisements, and gazing plots (to capture eye-movement during a five second frame). All respondents in the research were exposed to the same print advertisements, as well as the same questions.

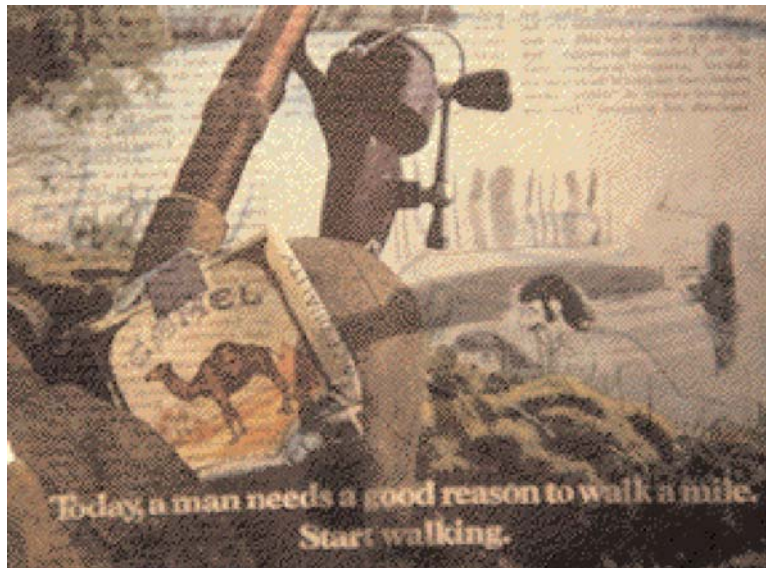
Twenty first-year students studying B.A. (Communication Science): Corporate and Marketing Communication at the University of the Free State took part. Eleven of these

respondents were Afrikaans-speaking and nine were English-speaking. There were ten male and ten female respondents. Five (25%) respondents were English female, five (25%) were Afrikaans female, four (20%) were English male and six (30%) were Afrikaans male. The participants were selected by means of a purposeful random sample. While the sample may not be representative of the entire population, these respondents were chosen in order to meet certain predetermined criteria. Because of their field of study, it was assumed that these students should be more sensitive towards advertising and how they experience an advertisement.

The advertisements used in this study were chosen using criteria on how to spot the subliminal previously discussed. The focus of this study was on print media. There are two reasons for this. The first is that print advertisements are easier to store and easier to study, and secondly it is not possible to give a complete reproduction of television commercials in a book, whereas a print advertisement can be reproduced as a whole. It can be added that subliminal advertising is not upfront, it is therefore easier to study print media where an advertisement can be studied for as long as needed to see the subliminal.

The pre-selected advertisements

FIGURE 3: ADVERTISEMENT 1



The advertisement in figure 3 was the first advertisement used in the study. The subliminal embed in this advertisement is relatively prominent and easy to spot, and was thus used as a point of departure. The subliminal can be seen in the background setting (the man and the woman on the lower right-hand quarter).

Exploring reaction to subliminal codes in print advertising

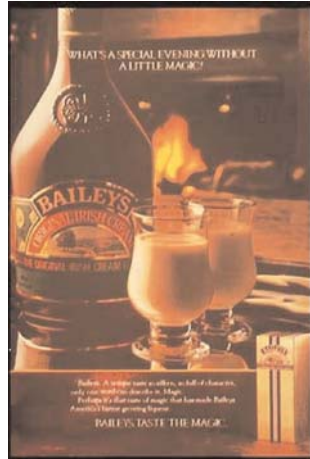
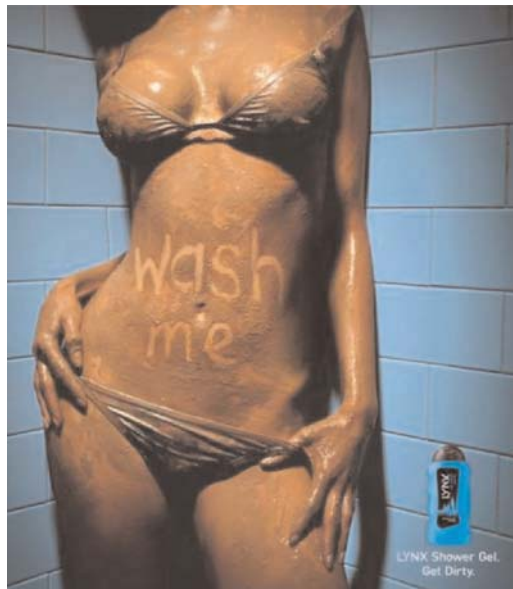
FIGURE 4: ADVERTISEMENT 2

Figure 4 represents the second advertisement used in the study. The subliminal embed is the fire. It can be seen as a face, with the two spots as the eyes, and the big flame as the nose. The nose is positioned in such a way that one can argue that it is busy smelling the liqueur. The designer might be playing on the unique and strong smell of the liqueur.

FIGURE 5: ADVERTISEMENT 3

The advertisement in figure 5 does not contain any hidden subliminal embeds, and was only included in the study to enhance the reliability of the results.

FIGURE 6: ADVERTISEMENT 4

This advertisement (figure 6) contains several hidden subliminal embeds. Fear and death and dangerous symbols were used in this advertisement. The subliminal embeds in the advertisements are highlighted in figures 6.1-6.5. The first subliminal embed in the advertisement is a meat cleaver blade (figure 6.1). The next subliminal embed (figure 6.2) is a shark-shaped creature emerging from the lower left-hand corner. When looking down the right of the advertisement, a camouflage net helmeted soldier (figure 6.3) with the lower pointed corner of what remains of the bottle piercing the helmet. The skull of a long-beaked bird (figure 6.4) complete with the gaping eye socket can be seen down the middle of the advertisement. Finally, when looking at the background rather than the foreground, the outline of a large raven-like bird (figure 6.5) can be seen.

FIGURE 6.1: THE MEAT CLEAVER

Exploring reaction to subliminal codes in print advertising

FIGURE 6.2: THE SHARK

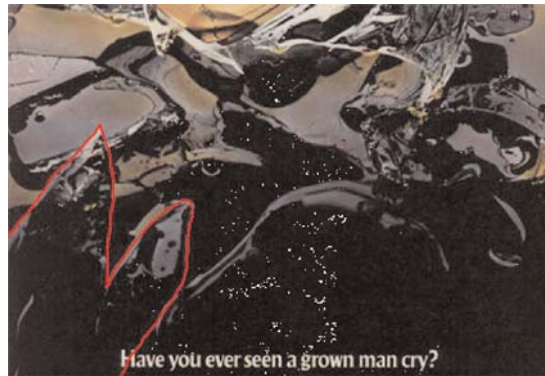


FIGURE 6.3: THE SOLDIER'S HEAD



FIGURE 6.4: THE SKULL OF THE BIRD

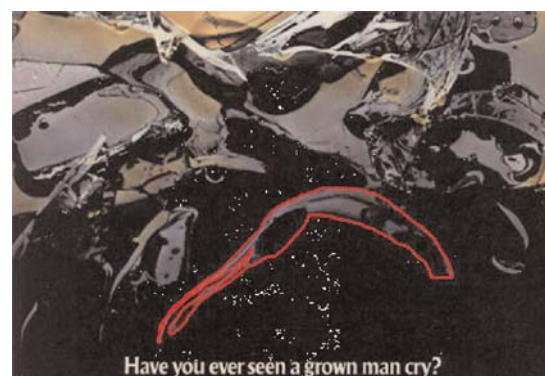


FIGURE 6.5: THE RAVEN-LIKE BIRD

In the last advertisement (figure 7) the subliminal embed is in front of the beer on the floor at the spill. When reading it from right to left, it spells S E X. It becomes clearer when you imagine reading it as from standing behind the beer. The S can be found on the right-hand side of the glass, the E in the middle (not as visible as the rest) and the X below the ear of glass.

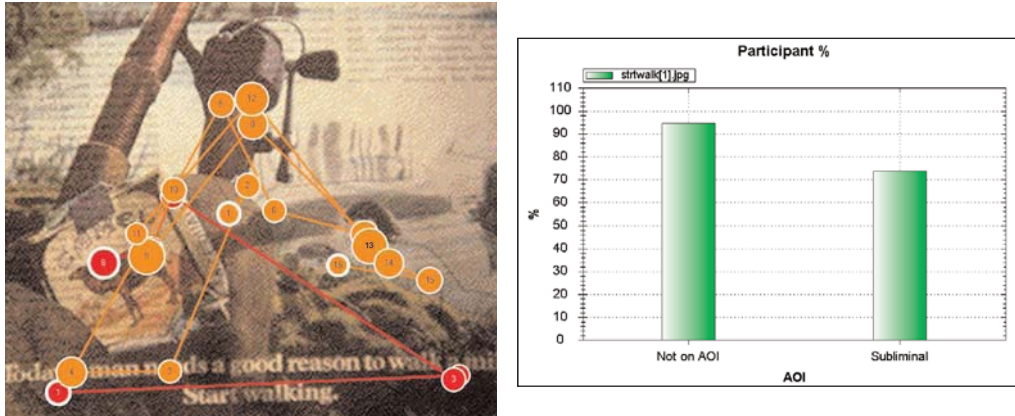
FIGURE 7: ADVERTISEMENT 5

RESULTS OF THE STUDY

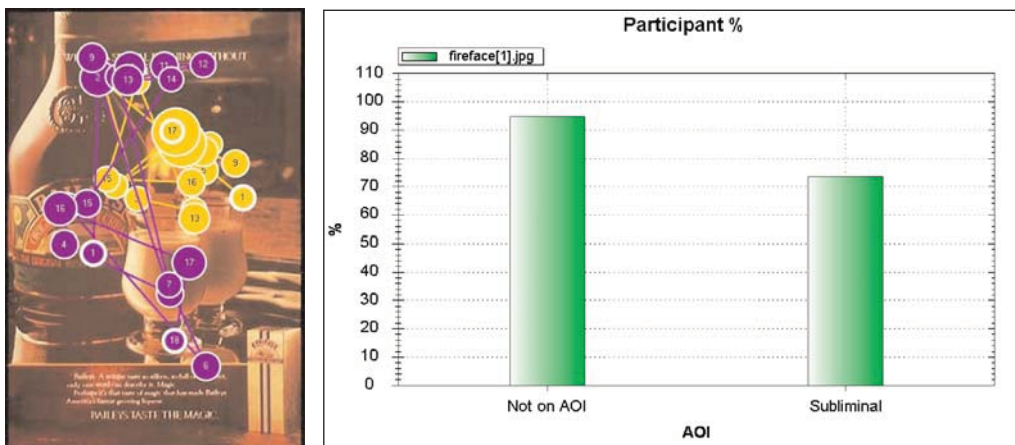
Findings of the Tobii Eye-tracker together with Phase A of the questionnaire

The respondents were exposed to each advertisement for five seconds. The Tobii Eye-tracker identified the subliminal area in each advertisement as an area of interest (AOI). It was then calculated how many respondents focused on the subliminal during a five second frame. To indicate how some respondents focused on these AOI and some not, an example of each advertisement will be included where one respondent focused on the AOI and one not. These examples are called a gaze plot. This is captured by Tobii. Each dot indicates a fragment where the respondent focused on the advertisement. They are numbered to follow the eye-gaze. The bigger the dot, the longer the respondents focused on that specific area.

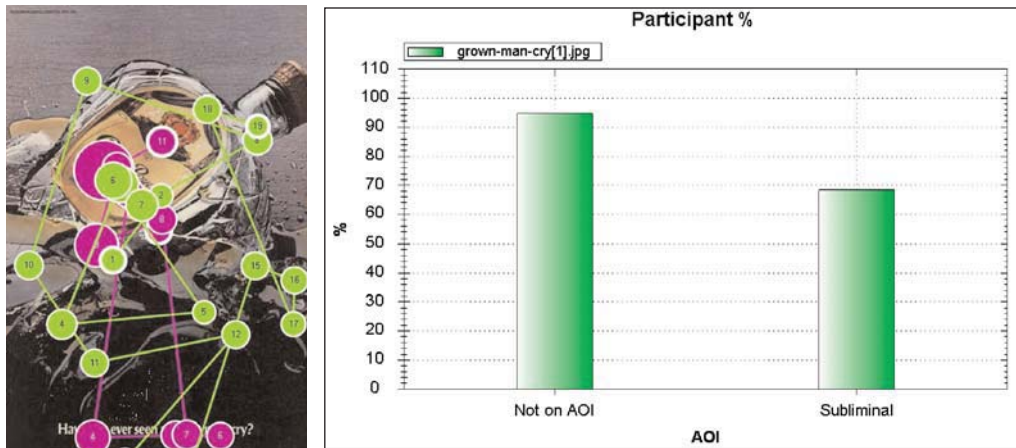
Exploring reaction to subliminal codes in print advertising

FIGURE 9: ADVERTISEMENT 1 – GAZE PLOT AND PERCENTAGE OF AOI

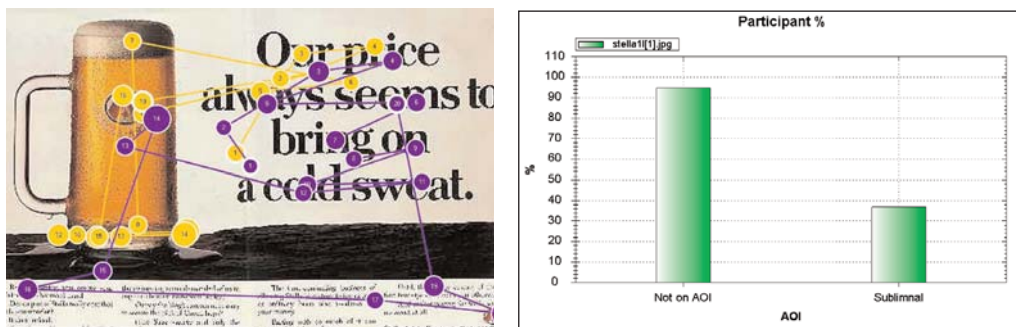
During the five second frame, 73.68% of the respondents focused on the AOI in advertisement 1. From the example in figure 9, it is clear that the respondent in red missed the AOI (which is also known as the subliminal embed) while the respondent in orange focused on this area for a while, as indicated by the size of dot 13.

FIGURE 10: ADVERTISEMENT 2 – GAZE PLOT AND PERCENTAGE OF AOI

During the five second frame, 73.68% of the respondents focused on the AOI in advertisement 2. This is a clear example of one respondent noticing only the AOI. The bigger dots in the AOI indicate the long period that this respondent focused on the AOI. The respondent in purple did not once take note of the AOI, and only focused on the product and slogan.

FIGURE 11: ADVERTISEMENT 4 – GAZE PLOT AND PERCENTAGE OF AOI

During the five second frame, 68.42% of the respondents focused on the AOI in advertisement 4. In this example (figure 11), the respondent in purple focused on the product and the slogan, the main components of the advertisement, without looking at any subliminal embeds. The respondent in green saw the slogan and the product, but also focused on the AOI more than once. This respondent actually captured all five subliminal embeds in this advertisement during the five second frame.

FIGURE 12: ADVERTISEMENT 5 – GAZE PLOT AND PERCENTAGE OF AOI

During the five second frame on advertisement 5, almost 37% of the respondents focused on the AOI. Once again, it is clear that the respondent in blue only captured the product, slogan, and text at the bottom, while the respondent in yellow focused on the AOI below the beer.

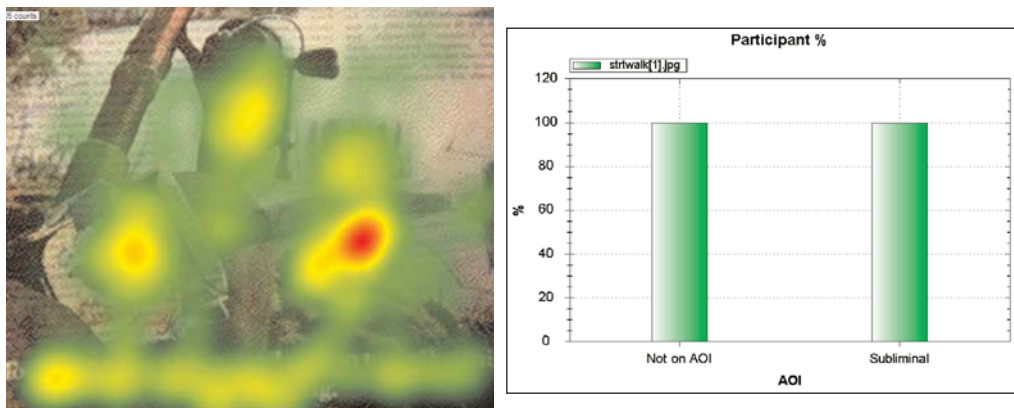
These examples all indicate how some respondents focused on the subliminal areas while others did not. When looking at these percentages, the question must be asked how many of these respondents actually realised what they were looking at. To clarify this, the information captured by the Tobii Eye-tracker was compared to Phase A of the questionnaire.

The subliminal embed in advertisement 1 is much more prominent than any other, and was thus easier to identify. According to the results of Phase A of the questionnaire, five respondents were able to identify the subliminal embed in advertisement 1, compared to the 14 respondents who actually focused on the subliminal embed. With advertisement 2, only one respondent identified the subliminal area, compared to the 14 who focused on the AOI. With advertisement 4 and 5, not one respondent was able to identify any subliminal embeds in the advertisement with 12 respondents focusing on the AOI in advertisement 4, and 7 focusing on the AOI in advertisement 5.

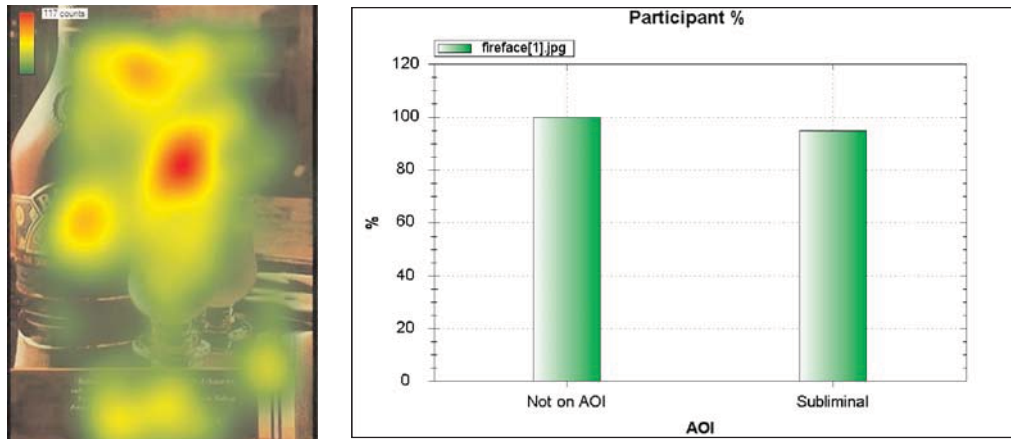
Results of the qualitative approach

During the structured interview, the respondents had each advertisement open to explore. Heat maps are provided for each advertisement to illustrate where the focus was during the structured interview. The red areas received the most attention and the green areas the least.

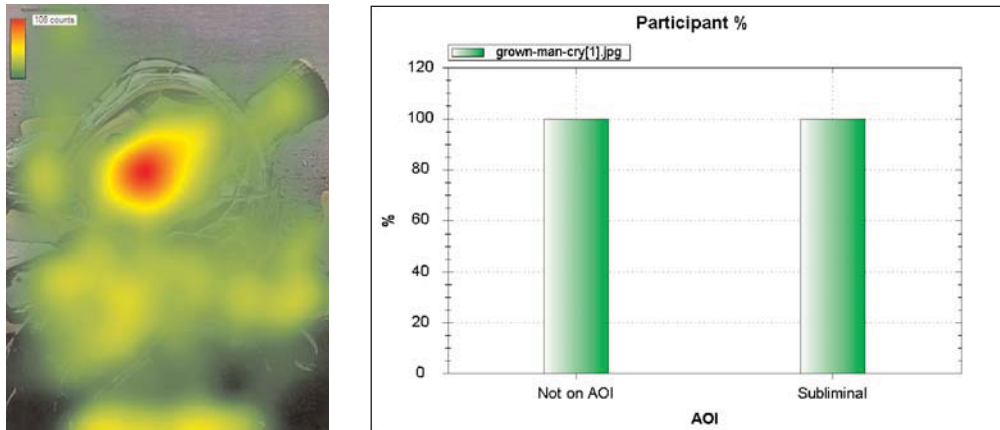
FIGURE 13: HEAT MAP FOR ADVERTISEMENT 1



As this was the most prominent subliminal embed, it is clear that it received a lot of attention during the structured interview. Of the 20 respondents, 18 were able to identify this subliminal embed. Twelve respondents identified the subliminal on the first question, four on the second question, two on the third question, and not one on the last question. A total of 90% of all respondents were able to identify the subliminal embed during the structured interview.

FIGURE 14: HEAT MAP FOR ADVERTISEMENT 2

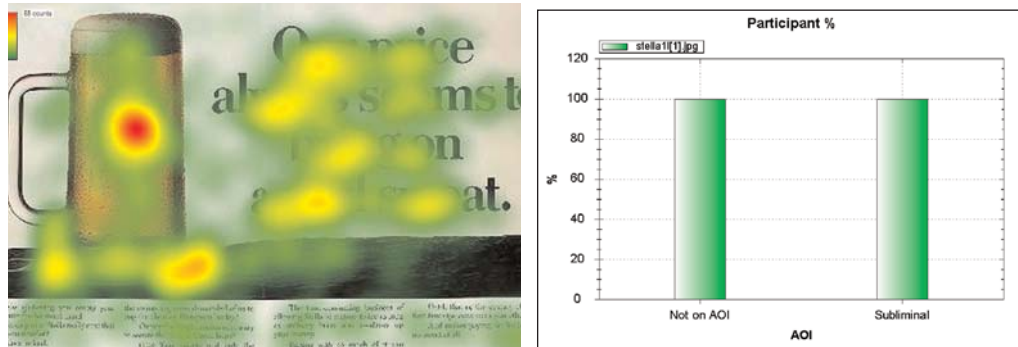
The example in figure 14 once again shows that the subliminal embed received a lot of attention during the structured interview. According to the information gathered from the structured interview, four respondents were able to identify the face in the fire. On the first question, only one respondent identified the face. It should be noted though that this is the same (and only) respondent who identified the face during the first five second frame. On the second question, not one respondent identified the face; one identified the face on the third question and two on the last question. A total of 20% were able to identify the subliminal embed in this advertisement during the structured interview.

FIGURE 15: HEAT MAP FOR ADVERTISEMENT 4

The subliminal embeds in this advertisement (figure 15) are more difficult to identify. As this advertisement contains several subliminal embeds, if the respondent were able to identify just one embed, it counted for the purpose of this section (to see a subliminal embed during a structured interview without it being pointed out). Although it is clear

that there was a lot of focus on the subliminal area, not one respondent was able to identify what they were looking at.

FIGURE 16: HEAT MAP FOR ADVERTISEMENT 5



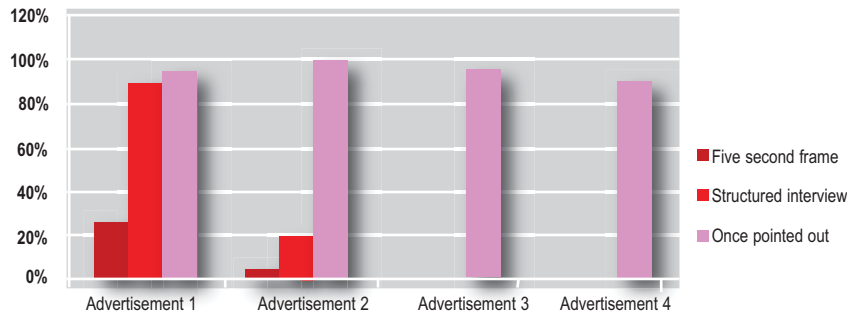
When looking at the above heat map (figure 16), it is clear that the subliminal embed was the second most studied area in the advertisement. In the centre of the yellow over the word SEX, one can see red starting to appear, which indicates that these areas were the most studied after the label on the beer. But still not one respondent was able to identify this subliminal embed. On the third question, when respondents were asked to read the advertisement in reverse (which lead to the word SEX being more noticeable) still not one respondent was able to identify this subliminal embed.

Findings of Phase B of the questionnaire

To complete this study, the subliminal embeds in each advertisement were pointed out to the respondents. This is a vital part of the study, as it refers to the hypothesis, which is: *The subliminal embeds in print advertising can only be seen once pointed out.* After the subliminal embeds were pointed out, 19 respondents were able to see it in advertisement 1; 20 respondents were able to see it in advertisement 2; 19 respondents in advertisement 4; and 18 respondents in advertisement 5.

Comparison of the results

TABLE 1: COMPARISON OF RESULTS



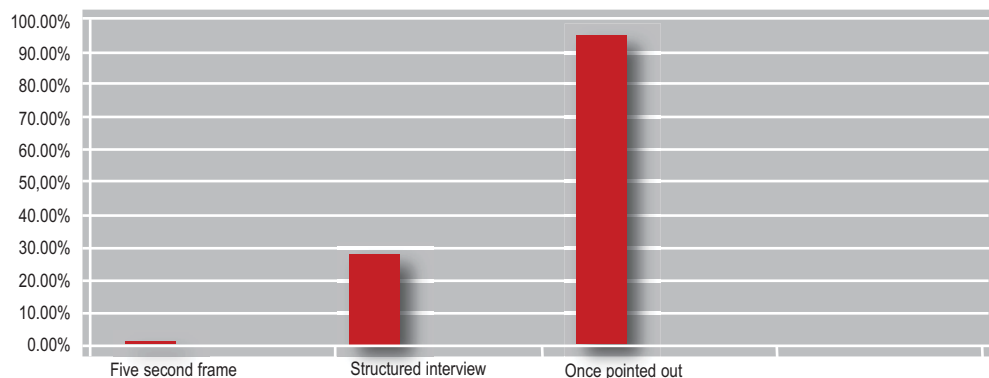
According to table 1, it is evident how much the percentages have increased once the subliminal embeds were pointed out. During the five second frame, the subliminal embeds that the respondents were able to identify were 25% in advertisement 1, and 5% in advertisement 2. After the respondents received guidelines during the structured interview on how to study the advertisement, 90% saw the subliminal embed in advertisement 1 and 20% in advertisement two, but still no one on advertisement 4 and 5. Only once the subliminal was pointed out to them, 95% saw the subliminal embed in advertisement 1, 100% in advertisement 2, 95% in advertisement 4 and 90% in advertisement 5.

Summary

During the first five second frame viewing of all advertisements, respondents focused on the subliminal embeds for approximately 65% of the time. However, the information gathered from the questionnaires indicated that only 0.75% of all the subliminal embeds were actually identified by the respondents.

During the structured interview, when the respondents were given hints on how to spot the subliminal embeds, 100% (n=20) of the respondents focused on the subliminal area in advertisement 1 and 90% (n=18) were able to verify the subliminal embed during the interview. While studying advertisement 2, 95% (n=19) of the respondents focused on the subliminal area, but only 20% (n=4) were able to identify the subliminal embed. When the respondents studied advertisement 4 and 5, all the respondents focused on the subliminal areas, but not one participant identified the subliminal embeds during the structured interview. During the structured interview, respondents focused on the subliminal area 98.75% of the total time, but only 27.5% of the respondents were able to identify the subliminal embeds. Once the subliminal embeds were pointed out to the respondents, 95% of the respondents identified the subliminal embeds. Thus it is clear that the subliminal embeds were only identified on all four advertisements once pointed out.

TABLE 2: INCREASE IN CONSCIOUS AWARENESS OF SUBLIMINAL EMBEDS



The first percentage of 0.75% represent the total number of respondents who could identify the subliminal embeds during the first five second frame of viewing the advertisements. The next percentage (27.5%) reflects the total number of respondents who identified the subliminal embeds during the structured interview, and the last percentage (95%) shows the total number of respondents who were able to identify the subliminal embeds once pointed out. The percentage increased dramatically towards the last phase of the research, when the subliminal embeds were pointed out. Thus it can be concluded that most subliminal embeds in print advertisements can only be seen once pointed out. However, the fact that in almost 65% of the cases, the respondents' eyes were fixed on the subliminal embeds, even though they were not consciously aware of what they were seeing might raise some interesting questions.

Recommendations

This study can be seen as a point of departure to investigate the influence that subliminal embeds in print advertising might have on an individual's perception of advertising, and ultimately purchase behaviour. Against the background of Ouwersloot and Duncan's (2009: 431) definition of subliminal advertising as messages that are received subconsciously below a person's perceptual threshold, and causing a desired response, marketing practitioners should definitely take note of subliminal advertising and be sensitive towards the use thereof.

A combined marketing and psychological study could be conducted to explore if the subliminal embeds that are subconsciously noticed have any influence on behaviour, and if so, what these influences might entail. It is important to remember that this study only focused on print media, and the results cannot be generalised to any other media such as radio or television. Similar studies could be conducted on these media types.

CONCLUSION

Even though the effect of media content cannot be predicted with precision, the knowledge that some kinds of messages (in this instance, subliminal messages) may have a specific kind of response in certain circumstances is strategically important in marketing and advertising campaigns. Fourie (2009: 229) opines that the quest for knowledge about a pervasive phenomenon such as the media makes knowledge and continued research about media effects scientifically important. It can contribute to the increased beneficial use of the media for the improvement of people's circumstances and society in general. This is an important aspect when the ethical considerations regarding subliminal advertising are taken into account.

Academics, advertising and marketing practitioners should find the results of this study valuable. To these practitioners, public perceptions, as well as the influence those perceptions might have on behaviour, should be very important. Different factors affect the reception of information, what is being done with that information and, consequently, its influence on buying behaviour (Egan 2009: 57). Perceptions are considered to be strong influencers.

This study did not aim to explain *if*, *how* or *why* this subliminal embeds might work, only whether they can be seen. According to the results, subliminal embeds in print advertising can only be seen once pointed out to the respondents. According to Chapman (2010) the thought of subliminal manipulation frequently excites passionate reaction. These authors claim that, before a subliminal explanation for the presence of something is automatically rejected, a better explanation for its appearance should be found. Although advertisers and researches disagree on the effectiveness of subliminal advertising, they should nevertheless be concerned about the public perceptions towards subliminal advertising.

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