SUBLIMINAL ADVERTISING
IS THE DEBATE OVER?

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ABSTRACT

While the effectiveness of subliminal advertising has not received much scientific support, it has caused concern amongst the public. Although subliminal perception is believed to exist, and may even stimulate a basic drive, or attitude towards a product, there is minimal support for subliminal advertising directing behaviour towards purchasing that particular brand.

Several consumer behaviour concepts help explain how advertising attempts to influence consumers including: purchase decision making, the hierarchy of effects model, the elaboration likelihood model and classical conditioning. Subliminal advertising seeks to use the same concepts in a more covert fashion. Four studies of subliminal advertising are reviewed. While each has claimed some success with subliminal messaging, there are questions about the methods and analysis of these studies. The findings can be summarized: while subliminal advertising may affect consumers' preferences, there is no unequivocal evidence of it manipulating consumer choice behaviour.

The weak nature of findings demonstrating success and the public’s general distrust of advertisers thought to be using subliminal messages, suggest that advertisers would be far better to avoid the phenomenon, and stick to the myriad subtle (but not subliminal) methods that can be used to influence consumers.

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1. Concept and Definition

Subliminal advertising is based on the principle of subliminal perception, the study of which dates back to before 1913 (Theus 1994). Subliminal advertising has been defined 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." (Trappey 1996, p.517)

"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" (Aylesworth, Goodstein and Karla, 1999, p.74)

Both these definitions presume that subliminal advertising is purposefully conducted by the advertiser, without the consumer having conscious awareness of its presence. In both definitions, subliminal stimuli consist of pictures, words, shapes and other marketing stimuli, including brand representations. While neither definition specifies sounds, we can assume that words and other marketing stimuli include auditory versions.

Further, both authors specify that stimuli should be presented at levels too weak to be consciously detected. The means for delivery of sub-threshold stimuli in studies by these two authors included the following:

- Brief presentation of visual stimuli, for example flashing words on a screen.
- Embeds: figures (usually of a sexual or morbid nature) inserted into magazine advertisements. While unlikely to be distinguished from their context, many subjects can distinguish embeds after being told about their presence (Rosen and Singh, 1992). Others, including Moore (1988), consider embeds merely to be 'unattended'.
Other methods of presentation include:

- Masked stimuli: stimuli which are disguised by some more dominant effect (Aylesworth et al 1999).
- Figurally transformed stimuli: visual images transformed so that they can no longer be recognized (Aylesworth et al 1999).
- Accelerated speech in low volume auditory messages (Theus 1994).

The major difference between the two definitions is that Trappey (1996) specifies that the information presented is *decoded* and *acted upon*. In the marketing and advertising literature, effects such as these, attributed to subliminal stimuli can be grouped into two levels:

Weak responses: General evaluative or cognitive responses, including attractiveness, attitude, beliefs, that are assumed to have some persuasive influence (Moore 1982)

Strong responses: Specific impacts upon behaviour (Moore 1982, Trappey 1996), including choice or purchase.

### 2. Theoretical Background

Several consumer behaviour concepts inform contemporary knowledge about how subliminal advertising works.

#### 2.1 Purchase Decision Making

Traditionally, decision making has been viewed as a conscious, rational process. However, some aspects of purchase decisions may be less rational than others, for example impulse buying (Solomon 1994). Rational or not, some need must be perceived, that triggers the consumer to find a way to satisfy it (Solomon 1994). Need recognition can be generated by the marketer - encouraging consumers not to be satisfied with their current condition (Belch and Belch 2007). For example, Hawkins (1970) purported to trigger need recognition with subliminal stimuli.

Following need recognition, an information search is undertaken. Subliminal advertising has implications for an internal search, where a subliminal prime could increase brand familiarity when the consumer perceives it consciously (Kihlstrom 1987).

#### 2.2 Hierarchy Of Effects Model

The *Hierarchy of Effects Model* (Belch and Belch 2007) illustrates the distinction between subliminal perception and subliminal advertising, and the difference between strong level and weak level responses described in Section 1. The model outlines the sequential stages a consumer goes through when exposed to an advertising message: Awareness; Knowledge; Liking; Preference; Conviction; Purchase (Belch and Belch 2007). Sensation and perception are processes a consumer engages in as they become aware of a stimulus. Liking and preference are 'weak responses' and conviction and purchase, the 'strong responses'.

#### 2.3 Elaboration Likelihood Model

The *Elaboration Likelihood Model* explains how communications lead to persuasion (Belch and Belch 2007). When consumers lack the motivation or ability to process information, advertisers can use the peripheral route to persuasion, including subtle cues such as the attractiveness of the endorser, music and imagery to communicate with the consumer, rather than the message content (Belch and Belch 2007). Assuming that subliminal cues are perceived at some level, they could be classified as peripheral cues within this framework, and used to target consumers in low involvement situations.

#### 2.4 Learning - Classical Conditioning

Advertisers use classical conditioning principles in associating products with images that evoke positive reactions from consumers (Belch and Belch 2007). Subliminal stimuli can also be used to create positive feelings towards a product or service, for example upbeat and warm feelings described in the study by Aylesworth et al (1999).

#### 2.5 Information Processing - Memory

Kilstrom (1987) outlines two models of information processing that may help explain how subliminal perception works: *Anderson's Adaptive Control of Thought Model* assumes a single memory store which is divided into knowledge structures represented by a system of nodes and links. Awareness depends on the extent of activation, with messages passing from one node to the next along the links. Subliminal stimuli activate the system but not to so great an extent as stimuli the consumer is consciously aware of.

*Parallel Distributed Processing Models* postulate that information processing occurs through a large number of processing units that each excite the next in the chain, like neurons in the brain. Information is distributed across the system (not localized to one area) and disseminated very rapidly. Once the processing system reaches equilibrium, information reaches consciousness, but subliminal stimuli can affect the system prior to this point.
2.6 Personality Theory As The Basis For Embeds

In most studies, embeds are of a sexual or morbid nature. The choice of subject matter is based on Freud's theory that these images appeal to the id, which seeks gratification of repressed sexual desires and a death wish (Rosen and Singh 1992).

3 Review Of Prior Research

While there is plenty of evidence suggesting that subliminal stimuli can influence physiological and affective responses (Moore 1982, Theus 1994), studies in advertising and marketing yield less support. Some studies have demonstrated 'weak responses', changing affect, however none have been able to show intention to purchase the advertised brand. Four examples of alleged subliminal advertising are discussed below including examples of briefly flashed visual stimuli and embeds. Table 1 compares and contrasts aspects of each of the experiments.

3.1 Coke - 1970

Hawkins, (1970) subliminally presented the stimulus words "COKE", "DRINK COKE", and a control nonsense syllable "NYTP" through a tachistoscope. The subliminal stimulus "COKE" was found to arouse only the basic drive, thirst, and the command to "DRINK COKE" was no more effective. While indicating some success, the frequently presented subliminal cue "COKE" may have been as effective as supraliminal presentation of the same cue (Hawkins 1970). Saegert (1979) postulates that these results may be due to Type 1 Error. In light of criticism such as this, Beaty and Hawkins (1989) attempted to replicate the experiment, with no success.

3.2 Washing Detergent - 1985

Cuperfain and Clarke (1985) purported to change consumers' preferences for a brand of washing soap, following subliminal exposure of the package during a short film about washing techniques. Images were thought to provide more clues for interpretation of the stimulus. An increase in preference was observed, but only for a familiar brand, not an unknown brand (Cuperfain and Clarke 1985). These results were considered ambiguous due to the absence of threshold determination: the unknown brand stimulus may have been below the threshold due to its lighter colour (Cuperfain and Clarke 1985, Moore 1988). Moore (1988) also comments that "no controls for experimenter bias were evident, and the marginal results were made even more suspect because of improper statistical analysis" (p.109).

3.3 Gin - 1980

In 1972 Key published findings that subjects felt excitement or sexual stimulation when presented with a gin advertisement that contained sexual embeds (Caccavale, Wanty and Edell 1981), however the experiment has been criticised as poorly designed and reported (Caccavale et al 1981, Theus 1994). Bagley and Dunlap set out to refine Key's experiment in 1980, finding a significant percentage of respondents reported excitement or sexual stimulation to half the ads with embedded stimuli (Caccavale et al 1981). While an improvement on the original study, Bagley and Dunlap failed to measure the degree of effect the advertisements had on attitudes, recall or purchase intentions reported (Caccavale et al 1981, Theus 1994).

3.4 Whiskey And Cigarettes - 1985

Kilbourne, Painton and Ridley (1985) tested differences in responses to questions on cognitive, affective, behavioural and sexual scales, for subjects exposed to sexual embeds in print advertising. When presented with a sexual embed of a nude female in an advertisement for whiskey, evaluations on all scales were significantly raised. An ad for cigarettes containing a representation of male genitals was also tested, but without significant difference in responses, which was attributed to the fact that cigarettes are less sexually centered products than whiskey (Kilbourne et al 1985). The experiment was repeated measuring galvanic skin response (GSR), revealing marginally significant effects for both product advertisements (Kilbourne et al 1985).

All studies purported some success in changing respondents feelings, but each acknowledged that this was only the case in some situations, suggesting that success with subliminal stimuli is either very subtle or dependent on certain variables, for example brand knowledge, or an interaction between the type of product and the type of ad (Rosen and Singh 1992).

Two of the works have been replicated (3.1 and 3.3), showing respectively no success (3.1) and mixed support (3.3). In addition, the methods and analysis have been publicly questioned, for at least three out of the four studies.

### TABLE 1: SUMMARY AND COMPARISON OF SOME PRIOR RESEARCH

<table>
<thead>
<tr>
<th>EXAMPLE</th>
<th>3.1</th>
<th>3.2</th>
<th>3.3</th>
<th>3.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT</td>
<td>Coke/Drink coke</td>
<td>Washing Detergent</td>
<td>Gin</td>
<td>Whiskey and Cigarettes</td>
</tr>
<tr>
<td>MEASURE</td>
<td>Basic drive arousal &amp; Brand preference</td>
<td>Brand preference</td>
<td>Feelings of arousal</td>
<td>Brand evaluations GSR</td>
</tr>
</tbody>
</table>
4 The Use Of Subliminal Advertising

4.1 In Opposition

Laws regarding the use of subliminal advertising vary across different countries. For illegality to arise the advertising must actually be subliminal and intentionally so. The now infamous US Republican ‘RATS’ advertisement has caused much contention, but was not technically subliminal, as the stimuli was clearly visible (Gray 2000). There may also be occasions where supposed subliminal embeds have not been intentionally placed (Kelly 1979). It is possible that an image may be merely a figment of the viewer’s imagination (Parpis 2003).

Subliminal advertising has been banned in The United States in the past, but is currently not illegal (Block and Vanden Bergh 1985, Wall St Journal 2001). However, industry and government bodies exist which attempt to regulate its use. In Australia, the Australian Communications and Media Authority promotes self-regulation in the broadcasting, radiocommunications, telecommunications and online content industries (www.acma.gov.au 2006). Part of its Commercial Television Industry Code of Practice illustrates that while subliminal messaging is not illegal, it is not condoned by this industry body:

"A licensee may not broadcast a program, program promotion, station identification or community service announcement which is likely, in all the circumstances, to... use or involve any technique which attempts to convey information to the viewer by transmitting messages below or near the threshold of normal awareness" (Standard 1.8.4, Commercial Television Industry Code of Practice 2004)

There are also countries where subliminal advertising is illegal. These include: Canada (Scott, 2000) and Russia (BBC Monitoring Media, 2000). Reasons for this incorporate:

Moral dimensions: it is unethical to manipulate consumers without their awareness. Whether subliminal advertising is legal or not, the idea is reviled by consumers, and degrades the public’s perception of the advertising world (Kelly 1979).

Political dimensions: Governments have the responsibility of protecting the community and cannot condone the use of any advertising that misleads or manipulates consumers without their awareness. Political parties need to be especially careful in their advertising, as suspicions of subliminal advertising not only cast doubt upon the credibility of their organization, but also upon the core beliefs and values of their party.

Economic dimensions: Subliminal advertising is not in the spirit of fair competition. If it was demonstrated to be effective, subliminal advertising could give producers an unfair advantage in forcing inferior products into the market, as consumers may not have the ability to choose the best or most suitable product, resulting in less than optimal economic outcomes.

4.2 In Defence

As noted in Section 1, there is still discussion about whether embeds constitute subliminal messages. Advertisers and other communicators commonly use other subtle effects to influence consumers’ perceptions of products (Aylesworth et al 1999) via the peripheral route to persuasion:

Colours can be used to capture attention and create mood, not only through associations but other means, for example red has been shown to create arousal and stimulate appetite (Solomon 1994). Colour also has these functions in non-advertising communications such as information brochures, point of sale displays, and internet sites. Further colour commonly can be used to organize contextual relationships in print and web channels (Solomon 1994).

Smell has been intentionally used in stores to attract customers (Miller 1993), for example the smell of freshly washed clothes in a fashion outlet (Solomon 1994), and the natural smell of freshly baked bread wafting from a bakery will also attract customers, bringing associations of comfort and home cooking.

Music can create a variety of moods in advertising, but also at the point of sale. Music is also used to calm people waiting in
Subliminal auditory messages have also been used, for example, in self help tapes to quit smoking or lose weight, although consumers are skeptical about their effectiveness (Block and Vanden Bergh 1985). There have also been reports of success using subliminal auditory messages to deter shoplifters (Moore 1982).

Dramatic portrayals use metaphors to tell stories that go beyond literal interpretation, for example representation of competition by Big Brother in a 1984 IBM ad (Aylesworth et al 1999). Indeed, routinised processes for social judgment occur as we see advertising and in everyday life as we form impressions of people without conscious knowledge of the basis for our decisions (Kihlstrom 1987).

5 Conclusion

From reviews of prior research, there appears no doubt as to the existence of subliminal perception (Moore 1982, Theus 1994) and (based on the results of the studies in Section 3) subliminal advertising may be able to influence consumers’ beliefs to a minimal degree. It has not yet been demonstrated to affect purchase behaviour (Theus 1994), perhaps because consumers are in control of their responses to stimuli, and can overcome an attempt to produce undesired behaviour (Moore 1982).

One further study of interest is Trappey’s (1996) meta-analysis which sought to determine whether subliminal stimuli are an effective means for influencing consumer choice behaviour. His analysis of 23 prior studies, including 3.1, 3.2 and 3.4 claims to provide positive, but weak support for the claim, as his definition of choice includes brand preference. It should also be noted that the studies yielding support for the phenomenon may have been carried out under experimental conditions, which could encourage higher involvement. It is questioned whether the same responses would prevail in the real world (Beatty and Hawkins 1989, Solomon 1994).

Additional factors that make the implementation of subliminal advertising difficult include:

The phenomenon only seems to affect basic drives not motivation to purchase a particular product (Byrne 1959, Hawkins 1970).

Differences between individual threshold levels: Selecting subliminal thresholds for individuals is unrealistic for mass advertising (Beatty and Hawkins 1989, Moore 1982).

Position and distance from stimuli will affect thresholds and cannot be controlled (Moore 1982). Masking effects of supraliminal material: the total impression of a print advertisement, or a film presentation likely overpowers any suggestive stimulus (Kelly 1979, Moore 1982).

The effect of subliminal stimuli is generally short-lived so consumers may not have the opportunity to act upon their desire (Kilstrom 1987).

If the above factors can be overcome, there are some potential uses for subliminal stimuli. For example, exposing the consumer to an identical or similar display subliminally prior to the supraliminal presentation, which could enhance perception of the display (Kilstrom 1987, Moore 1982) or preceding a neutral stimulus by a positive or negative prime to influence perception of the stimulus in the direction of the prime (Sevan 1964, Kilstrom 1987).

Some research suggests that unconscious wishes can be activated by subliminal stimuli that specifically address that wish (Saegert 1987, 1979). If consumers hold an unconscious wish for a more masculine self-image, fulfilment of this wish through masculine imagery in a cigarette advertisement may result in greater affinity for the cigarette brand (Saegert, 1987).

That said, it should be finally mentioned that, implicit in the concept of subliminal advertising is the assumption that the presentation of a subliminal stimulus will be more effective than one of which the consumer is aware (Moore 1988). With the increased importance of ROI, and the consumer backlash against perceived subliminal manipulation, valuable advertising dollars must be invested in efficient and reliable methods. Aylesworth et al (1999) propose that marketers would benefit more by manipulating feelings and affects using subtle effects such as music, congruity, appeal type, role portrayals, and ad images.

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