The Effectiveness of non-focal exposure to web banner ads

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THE EFFECTIVENESS OF NON-FOCAL EXPOSURE TO WEB BANNER ADS

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We show that the repeated presentation of web banners with brand names can generate increased liking for these brands even when these banners did not receive focal attention. Our main contribution consists of a rigorous control manipulation of the focus of attention in order to assure that subjects did not look at the banners.

1. INTRODUCTION

The idea that exposures to marketing stimuli can lead to unintentional influences has always fascinated marketing practitioners and academics. There is solid evidence now that even in the absence of recall or recognition of the exposure, marketing communications can influence our behaviour (Anand, Sternthal, 1991). These findings have their theoretical underpinnings in the form of research on implicit memory (Shapiro, Krishnan, 2001). Applications of research on implicit memory in marketing are important to advance our understanding of communication effects because most exposures to marketing stimuli involve very little active processing. The fact that we have been exposed to them is therefore unlikely to be remembered. Researchers have, however, gone a step further and have also proposed that brand information that is not attended to can influence attitudes (e.g. Janiszewski 1988, 1990, 1993) and the likelihood that the brand enters the consideration set (e.g. Shapiro, MacInnis, Heckler, 1997). The term «incidental» has been used to describe this type of exposure and demonstrations of the effect have used what is referred to as an incidental exposure paradigm (e.g. Shapiro, MacInnis, Heckler 1997). We argue here that these demonstrations are not as powerful as they could be because it is not entirely clear if the experimental exposures were really non-focal. Our objective is not to put the validity of previous results into question, but rather to make a demonstration of the effect of exposure to unattended materials that is as unambiguous as possible.

2. FOCAL VERSUS NON-FOCAL PROCESSING

The distinction between focal and non-focal attention is fairly clear-cut in the case of visual perception. Focal vision is restricted to 1,5 to 5 degrees from the current point of focus. Stimuli in the focal field are treated by both brain hemispheres, while those outside this field are treated by only one hemisphere (or not at all). Stimuli that are present in the parafocal field are not entirely ignored. In fact, they receive pre-attentive processing, a kind of preconscious

monitoring of the visual field for events that may require a shift of attention away from the current point of focus.

In previous demonstrations of the effect of non-focal stimuli the subjects were instructed to focus their attention on a primary task like reading a mock newspaper while the test advertisements were peripherally present (e.g. Janiszewski, 1988; Shapiro, 1999). Compliance with this instruction was verified post-hoc by checking the recognition levels for the test stimuli (which should be at chance level if there has not been any focal processing) and verifying the correlation between recognition and ad evaluations (which should not be statistically significant, indicating that recognition did not influence the evaluations). This procedure to rule out the role of focal processing is clearly not perfect. Janiszewski (1988), for instance, acknowledges the possibility of what he calls perceptual drift. When reading the text in the mock newspaper, subjects may direct their focus of attention too far to the left when they move to a next line and this may lead to a short burst of attention to ads placed to the left. Because the exposure is so short (a matter of milliseconds) the ad may not be recognized subsequently but this does not exclude the well-known mere-exposure effect (Zajonc, 1968). Although both processes bear a lot of similarity and are often referred to as forms of incidental processing, it is important, both from a theoretical and practical perspective, to make a clear distinction between focal attention (even if the exposure duration remains under the identification threshold of the stimulus) and non-focal attention. Our study looks at the effects of web banners and the practical question we ask is whether these banners can be effective even if they do not receive focal attention.

Our hypotheses follow directly from the existing theory and previous demonstrations of the effects of incidental exposures. We will not review the theory here or elaborate the hypotheses. Instead we will describe the unique features of our study.

3. Experimental procedure

Subjects were told that the objective of the study was to examine the potential of people to memorize information presented through the internet in the context of online education. They were informed that they would be tested on their retention of the texts to be read, either immediately after their reading or eight days later. The texts treated topics in psychology and sociology. They were also told that we were interested in people's capacity to avoid distracting stimuli that are often presented on web pages. They were given the explicit instruction to ignore the web banners on top of the screen because these banners interfere with concentrated reading. Because we used eye-movement recording, subjects knew that their compliance with the instructions was verified. In addition, we tracked the pattern of eye saccades and fixations in real time and programmed the exposure of the banners such that the test banners were instantaneously replaced by a filler banner when the focal point of attention was diverted from the text towards the position of the banner. This way we could avoid focal attention. At the same time, we measured how closely eye fixations approached the test banners. This measure will be used in our statistical analyses.

Three texts were presented that each took about 2 minutes to read. In combi-

nation with the time for calibrating the eye-movement equipment, subjects spent about 12 minutes on the study session. This was followed by a series of questions about the text. Upon leaving the lab, subjects were intercepted and asked if they were willing to participate in an additional short study. The fact that this study was actually the test phase of the experiment was not revealed to subjects. Subjects that guessed there was a link between both studies were dropped from the analysis.

4. Research design

A three-factor factorial design was used to test our hypotheses. One group of subjects was not exposed to the experimental stimuli and served as control group. For the experimental groups, the number of exposures to each stimulus was either 5 or 15 and this variable was manipulated within subjects. The brands were either presented in isolation (in the form of a logo; see Figure 1 for illustrations) or in combination with a product name. We introduced this second factor to validate previous findings of conceptual processing in the absence of focal attention (Shapiro, 1999; Lee, Labro 2004). The third factor was the delay between the exposure and the administration of the dependent measures. These measures were either taken about 5 minutes after the study session or 8 days later. A total of 247 undergraduate students participated in our study for course credit.

5. Stimuli

A total of 12 banners with logos were developed as experimental stimuli. To avoid contamination of the results by prior exposure to brand names, we invented a series of names that were subsequently pre-tested in order to assure that the brand names by themselves did not evoke particular product categories (testing whether exposure to the combined presentation of the brand and product name led to an association of both elements, a form of conceptual processing, was one of the objectives of this study).

A filler banner was presented on the screen before and after the experimental presentations. The first experimental banner was presented 5 seconds after the start of the reading session and each banner presentation lasted 3 seconds.

6. Dependent measures

In the test phase of the study, three groups of forced-choice questions were asked all requiring yes or no answers that had to given by pressing the left or right mouse button. The assignment of the mouse buttons to positive or negative responses was randomised across subjects. Subjects could choose which hand to use to answer and were instructed to answer as

FIGURE 1.
SAMPLE BRAND STIMULI

fast and accurately as possible. A short training session was provided before the actual dependent measures were taken. We used forced-choice questions and the computer mouse as response instrument in order to take reaction-time measures. One point of interest is the strength of potential positive evaluations. Our analyses of these measures are inspired by recent research on implicit attitudes (Wilson, Lindsey, Schooler, 2000).

In the first block of questions the 12 experimental brands were shown one at a time and subjects had to indicate whether they liked the brand or not. Two filler brands were used to start this block. In the second block subjects had to tell whether they considered the brand name appropriate or not to commercialise each of four products (one of which was the product category presented in the study phase for the subjects in the brand + product condition). Next, 6 evaluation questions were asked for each of the brands. Finally, purchase intentions were measured with two forced-choice questions.

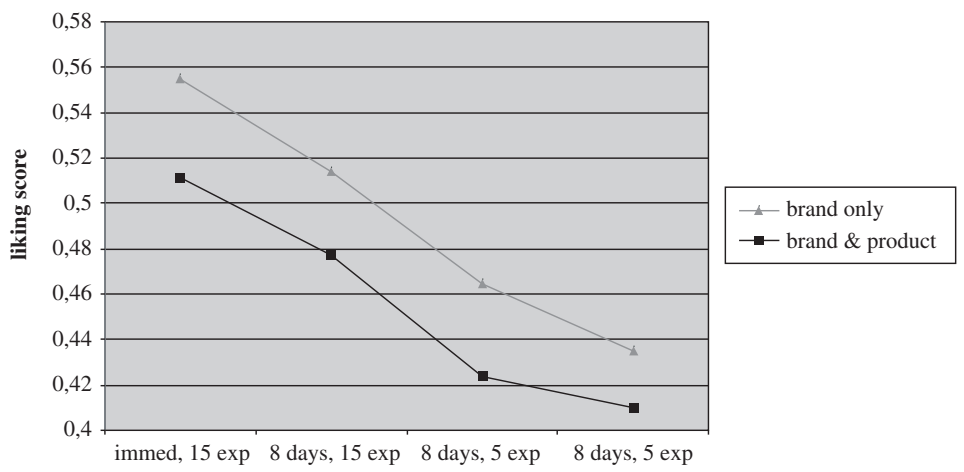
7. ANALYSIS

We discarded all observations for which we suspect there may have been even the slightest level of focal attention. In the context of the present article we only examine the effect of the non-focal exposure on liking for the brands. The evaluations were averaged to get an overall evaluation of each brand by each subject. The average scores are given in Figure 1. An analysis of variance confirmed that the sole presentation of a brand leads to a higher effect of the exposures, compared to the combined presentation of brand and product ($p < 0{,}03$). The number of exposures also has a clear influence ($p < 0{,}0001$). The effect of delay was, however, not statistically significant ($p > 0{,}77$).

8. CONCLUSION

We show that banners on a web page can lead to increased liking for the advertised brands, even if consumers do not look at these banners and focus on the content of the web page instead. Our main contribution is a rigorous control of

FIGURE 2.
MERE EXPOSURE EFFECT



visual attention that excludes all forms of focal processing of the banners. We show that the effect is more pronounced when the banner has simple visual content. Presenting just the logo leads to more liking for that logo than when it is co-presented with the product. The number of exposures plays an important role. We found no saturation effects: 15 exposures is better than 5. Future research should examine whether it is the number of exposures as such that plays a role or rather the total duration of exposure. Our conjecture is that the start of an exposure is captured by the pre-attentive scanning system and that it is therefore the number of exposures that matters. Finally, the fact that our manipulation of the time between exposure and test does not turn out to be significant implies that the increased liking does not decay over the time period of a full week. Our subsequent analyses of our data will focus on an in-depth analysis of reaction times and the proximity between attended and non-attended material.

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