Warning: You are being primed! The effect of a warning on the impact of subliminal ads ☆

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HIGHLIGHTS

- Can people protect themselves against subliminal advertisements?
- As in previous research, goal-relevant brand primes affected choice
- Brand primes no longer affected choice when people were warned against subliminal ads
- Both people warned before and after priming failed to be influenced
- Thus, vigilance seems to diminish the link between prime and behavior

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ABSTRACT

As it has been demonstrated that subliminal advertising can affect consumers' decisions – if the ad is goal relevant – the question rises whether consumers are able to shield themselves from subliminal influences. In the present research it was examined whether warning people of the presence of subliminal ads could decrease subliminal advertising effects. In Study 1, it was demonstrated that warning people of subliminal ads indeed diminished priming effects on consumer choice, whereas subliminal advertising effects were replicated for people who were not warned (i.e., people for whom the primed brand was goal relevant were more likely to select it when primed). Study 2 extended these findings, revealing that both participants warned before and after the priming manipulation were less influenced by subliminal brand primes than controls. This suggests that the warning does not decrease participants' sensitivity to the prime, but instead affects the influence of the prime at the behavioral level. Several explanations and implications are discussed.

Introduction

Subliminal advertising has been a controversial topic since the 1950s. It has been unclear for decades whether subliminally presenting a brand name was effective in influencing consumer choice. However, recently, it was demonstrated that under specific conditions subliminal advertising can affect (choice) behavior (e.g., Karremans, Stroebe, & Claus, 2006). Such findings are accompanied by concerns regarding the ethical appropriateness of subliminal persuasion techniques (Nebenzahl & Jaffe, 1998). By definition, subliminal advertising operates via an automatic process of which people are not aware, which fuels the idea that people may not be able to protect themselves against this type of persuasion. Hence, a theoretically and practically important issue is whether people indeed are helpless against subliminal influences. To address this issue, in the current research, we examine whether people are able to shield themselves from subliminal advertising effects when they are warned of subliminal influences.

Subliminal advertising

Half a century ago, James Vicary introduced subliminal advertising by claiming that he had increased the sales of popcorn and Coke in a movie theatre by presenting 'Drink Coke' and 'Eat Popcorn' for a fraction of a second during the movie. However, the data of his study were never published, and when several scientific replication attempts failed (e.g., Hawkins, 1970; Weir, 1984), Vicary finally revealed his claim as a hoax. However, after years of controversy (Pratkanis & Greenwald, 1988; Trappey, 1996), subliminal advertising has recently been shown to be effective, but only under certain conditions (Bermeitinger et al., 2009; Karremans et al., 2006; Verwijmeren, Karremans, Stroebe, &

Wigboldus, 2011). Research on this topic was re-instigated based on the more general finding that subliminal priming is more effective if the prime is goal-relevant. Specifically, Strahan, Spencer, and Zanna (2002) showed that subliminally priming a goal-relevant cognition (e.g., thirst) affected the persuasiveness of a supraliminal ad targeting the goal (e.g., quenching thirst), when they were motivated to pursue the goal (i.e., when they were thirsty). Karremans et al. (2006) applied this to subliminal advertising. They found that subliminally priming a brand of soft drink increased choice for that drink, but only for participants who were already thirsty and thus the primed brand was goal relevant. Conceptually replicating these findings, Bermeitinger et al. (2009) demonstrated that especially people for whom energy pills were goal relevant were susceptible to subliminal priming of the logo of a brand of energy pills. Finally, Verwijmeren et al. (2011) demonstrated that subliminal brand priming only affected brand choice for thirsty people if the primed brand was a non-habitual brand. Together, these findings demonstrate that, when certain boundary conditions are met, subliminal advertising can affect consumer choices.

Controlling subliminal advertising effects?

Subliminal advertising is not only controversial scientifically. People generally abhor the idea that they can be influenced without their knowledge, and more importantly, without being able to control it (e.g., Bargh & Chartrand, 1999; Wegner, 1994). As a case in point, advertising ethics have proposed that subliminal advertising violates basic ethical concerns (Nebenzahl & Jaffe, 1998). These concerns are grounded in the belief that the effects of subliminal advertising cannot be controlled, challenging fundamental beliefs in free will. Indeed, people are generally inclined to feel uneasy with the notion that much of their behavior is automatic (Bargh & Chartrand, 1999). Subliminal advertising is not only testament to this idea, but also provides another person with the tools to operate these automatic influences to their own benefit.

However, although the assumption that controlling subliminal influences is impossible firmly exists in the public opinion, it is unclear whether people are actually unable to shield themselves from subliminal advertising. Is it necessarily the case that, if people are unable to detect and identify the subliminally presented stimulus, they are also unable to protect themselves against its effects? What if people are warned and made aware of the presence of subliminal influences? With regard to these questions it is important to take a closer look at the processes underlying subliminal advertising effects.

It is generally understood that subliminal priming causes the primed construct to become more easily accessible from memory (Loersch & Payne, 2011). As such, it can influence behavior in a multitude of ways, mainly directed by the specific task demands. For example, if the construct of intelligence is accessible through priming, it can lead to a person being more intelligent if presented with an intelligence task (Dijksterhuis & van Knippenberg, 1998), or to judging someone else as more intelligent if provided with the task to evaluate others (Higgins, King, & Mavin, 1982). Similarly, subliminal advertising increases the accessibility of the advertised brand name, which automatically may lead to an increased choice for the primed brand, especially if that brand is goal-relevant.

However, there is accruing evidence that people's responses are not always automatically influenced by accessible information (e.g., Schwarz & Clore, 2003). Situations where 'nothing is wrong' allow for a heuristic processing style in which people respond primarily on accessible information. However, when caution is necessary, people become vigilant and stop trusting these automatic tendencies, engaging in a more deliberative processing style that may overrule responses based on readily accessible information (Bless, Bohner, Schwarz, & Strack, 1990; Bless & Schwarz, 1999; Bodenhausen, Kramer, & Süsser, 1994; Clore, Gasper, & Garvin, 2001; De Vries, Holland, & Witteman, 2008; Holland, De Vries, Hermsen, & Van Knippenberg, 2012; Schwarz & Clore, 2003). Put differently, in the absence of threat, people rely on their automatic tendencies and

exert little effort over their behavior. In contrast, a state of vigilance induces people to rely less on automatic impulsive tendencies.

In line with this, Holland et al. (2012) demonstrated that among sad individuals – arguably a cue indicating that 'something is wrong' (cf. Estes & Adelman, 2008; Pratto & John, 1991) – behavior is relatively strongly predicted by belief-based attitudes, whereas the behavior of happy, non-vigilant, individuals is more strongly predicted by the concepts that are accessible at that moment. Similarly, Hänze and Meyer (1998) found weaker automatic semantic priming effects (i.e., accessibility effects) among sad as compared to happy people. More directly related to the current research, DeMarree et al. (2012) demonstrated that inducing a feeling of doubt decreases the relationship between primes and behavior. For example, when participants described past occurrences in which they felt doubt (vs. confident), priming a self-improvement goal or the goal to save money influenced donations to a charity less strongly. Moreover, Loersch and Payne (2012) demonstrated that when participants were informed that their behavior was being influenced by subliminal messages, priming effects were no longer observed. For example, they demonstrated that subliminally priming participants with either 'fast' or 'slow' affected their reading speed accordingly. However, this effect disappeared when participants were made aware that subliminal primes influenced their behavior. Together, these findings suggest that behavior is less likely to be automatically influenced by accessibility (induced by priming), when people are cautious.

Based on the above, we predicted that subliminal advertising may affect consumer choices to a lesser extent when consumers are being warned, as a warning may reduce reliance on accessible information when making a choice. Two studies examined this basic prediction. In both studies, participants were provided with a warning disclosing the presence of subliminal ads and their unconscious effect on behavior. In the first study, we tested whether warned participants (vs. control) would be less affected by subliminal primes. In the second study, we examined at what moment a warning is necessary to reduce priming effects: Some participants were warned before the priming manipulation, whereas others were warned after the priming manipulation, but before the moment of choice.

Study 1

In Study 1, half of the participants received a warning that they would be unconsciously influenced, whereas the other half received no such warning. After a priming manipulation, in which participants were subliminally primed with a brand of beverage, they made a choice between the primed brand and an alternative brand. We expected that, without warning, participants would choose the primed brand more often than the alternative, but – as in previous research – only when participants were already thirsty. However, when participants were warned, we expected the effect of subliminal priming to decrease.

To explore a possible underlying mechanism, we manipulated cognitive load while participants made the choice. A high level of cognitive load impairs people's ability to inhibit automatic responses (Van Knippenberg, Dijksterhuis, & Vermeulen, 1999). So, if a high level of cognitive load decreases the effect of a warning on the influence of subliminal ads – and thus, choice is predicted by the primed brand – it would suggest that warned people need to actively override an automatic response generated by the prime to negate the effect of the prime. However, if the effect of warning is not affected by cognitive load, this might point to a different mechanism, that does not rely on active inhibition of automatic responses.

Method

Participants and design

A total of 173 students of Radboud University participated in this experiment for money or partial course credits. One participant did