Advertising literacy and children's susceptibility to advertising

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Chapter 5

The Role of Cognitive and Affective Defense Mechanisms in Reducing Children’s Susceptibility to Advertising Effects

Abstract

The principle aim of this study was to develop and test a model of children’s advertising defenses. Within this model, two paths to reduced advertising susceptibility (i.e., attitude towards the advertised brand) were hypothesized: a cognitive and an affective path. The secondary aim was to compare these paths using two thought-elicitation methods (i.e., think-aloud and thought-listing). The model was tested on a sample of 8- to 12-year-old children ($N = 163$). Structural equation modeling revealed that, for children in the think-aloud group, both the cognitive and affective path were successful in reducing advertising susceptibility. However, for children in the thought-listing group, the affective path was effective only. These findings suggest that the think-aloud method increased children’s motivation and ability to critically process the commercial message.

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Introduction

Children’s advertising susceptibility has long been the subject of academic and societal debate. Within this debate, it is generally assumed that advertising-related knowledge, or ‘advertising literacy’ (e.g., Livingstone & Helsper, 2006; Young, 1990), can reduce advertising’s effect on children. Accordingly, advertising literacy is often seen as a defense against advertising (Brucks, Armstrong, & Goldberg, 1988; Rossiter & Robertson, 1974). However, to defend against the effects of advertising, children must not only possess the necessary advertising literacy, they must also, and even more importantly, be able to use (i.e., retrieve and apply) this literacy in order to critically process an advertising message while being exposed to it.

An extensive body of research has focused on the development of children’s advertising literacy (e.g., understanding advertising’s intent; see John, 1999; Kunkel et al., 2004; Rozendaal, Buijzen & Valkenburg, 2009a; 2010). However, children’s ability to retrieve and apply this literacy as a critical defense has rarely been studied. To our knowledge, only Brucks et al. (1988) have investigated this crucial skill. They examined 9- to 10-year-old children’s thoughts while watching television commercials and found that children generated critical thoughts about the commercials only when given a cue to retrieve their advertising literacy from memory. This is in line with developmental and information processing theories (John, 1999; Moses & Baldwin, 2005; Roedder, 1981) suggesting that children between the ages of 8 to 12 years lack the cognitive abilities to retrieve and apply previously stored knowledge spontaneously and, instead, are able to do so only when triggered by a cue.

While the critical thoughts produced by the children in Brucks et al.’s study reveal an effort to defend against advertising’s persuasive appeal, the authors did not address the effectiveness of these efforts in reducing children’s susceptibility to advertising’s effects. A long tradition of research suggests that critical thoughts about the advertising message, the advertised product or advertising in general, arising during advertising exposure, are important mediators of persuasion among adults (e.g., Greenwald, 1968; Petty & Cacioppo, 1979; Wright, 1973). However, it is unclear whether these results also extend to children.
The present study aims to establish the role of children’s critical thoughts, or defense responses, in the persuasion process. Specifically, we examine whether 8- to 12-year-old children produce defense responses during exposure to a television commercial and, in turn, whether these responses lead to reduced susceptibility to its effects. We focus on brand attitude as an indicator of advertising susceptibility as this is considered one of the most important predictors of the behavioral outcomes of advertising exposure, such as purchase intent and consumption (see Brown & Stayman, 1992; Phelps & Hoy, 1996). We focus on 8- to 12-year-olds as information processing theories suggest that even if children in this age group have acquired the necessary advertising literacy, they may still lack the cognitive abilities to retrieve and apply this literacy as a defense (John, 1999; Moses & Baldwin, 2005; Roedder, 1981). By investigating the link between children’s defense responses and advertising effects, this study provides important insights into children’s ability to defend against the persuasive appeal of advertising.

A Conceptual Model of Children’s Advertising Defenses

Two types of defense response are generally distinguished: cognitive and affective (e.g., Batra & Ray, 1986; Jacks & Cameron, 2003; Zuwerink & Devine, 1996). Cognitive defense responses include any critical thoughts occurring while processing advertising that are based on cognition. Such defense responses require children to utilize prior knowledge, in that they must retrieve pre-existing knowledge from memory and apply this to the content of the advertising message (Brucks et al., 1981; Friestad & Wright, 1994). For example, when exposed to an advertisement, children may use their advertising literacy to construct responses in which they explicitly express an awareness and understanding of its intent and persuasive tactics (e.g., “they want children to ask their parents for this doll”), or to respond negatively toward the advertisement (e.g., “ads don’t tell the truth”). Affective defense responses include thoughts occurring while processing advertising that express negative affect toward the advertisement, the advertised product or brand, or toward advertising in general. Typical examples include “yuck!”, “this is stupid!” and “I don’t like this” (Brucks et al., 1981; Jacks & Cameron, 2003; Zuwerink & Devine, 1996).

This study proposes a conceptual model to explain how children’s defense responses may reduce their susceptibility to advertising effects (i.e.,
attitude toward the advertised brand). Within this model, we hypothesize two paths to reduced brand attitude; one incorporating the impact of cognitive defense responses and one incorporating the impact of affective defense responses. As previous research has shown that attitude toward the advertisement is one of the most important mediating factors in the persuasion process (e.g., Brown & Stayman, 1992; Buijzen, 2007; Derbaix & Bree, 1997; Moore & Lutz, 2000; Phelps & Hoy, 1996), we anticipate that both paths will be mediated by children’s ad attitude. Specifically, we anticipate that the cognitive defense path will be mediated by the cognitive component of attitude towards the ad (i.e., increased skepticism toward the advertisement) and the affective defense path will be mediated by the affective component (i.e., decreased liking of the advertisement). Finally, we expect skepticism toward the advertisement to influence children’s attitude toward the advertised brand directly and also indirectly, via ad liking. That is, children who are more skeptical about the ad will like it less (Buijzen, 2007) which, in turn, will reduce their attitude towards the advertised brand. The paths leading from both cognitive and affective defense responses to reduced advertising susceptibility are modeled in Figure 1.

**Figure 1** Hypothesized model of children’s cognitive and affective advertising defenses.

Measuring Children’s Defenses Responses

The traditional method of measuring recipients’ responses during advertising exposure is *thought-listing* (e.g., Cacioppo & Petty, 1981; Ericsson & Simon, 1980;
Wright, 1973). This technique requires participants to retrospectively provide verbal or written reports of the thoughts they experienced during advertising exposure. Being a recall technique, one disadvantage of thought listing is that it may be difficult for individuals to accurately remember the thoughts experienced while performing a task (e.g., processing a television commercial). Retrospection implies that information must be retrieved from long-term memory and then verbalized, which may be particularly difficult for 8- to 12-year-old children. As a consequence, children may fail to report thoughts they had while viewing the commercial or may report false memories, whereby thoughts that did not actually appear were retrieved as if they did (Van Someren, Barnard, & Sandberg, 1994).

Another often used method is think-aloud (e.g., Ericsson & Simon, 1993; Genest & Turk, 1981). Here participants are asked to verbalize their thoughts while simultaneously performing a specific task. Compared to thought-listing, this technique has the advantage of providing an ongoing record of thoughts and thus reduces potential memory bias. However, as think-aloud is a concurrent technique, it may interfere with the ongoing cognitive process (e.g., processing a television commercial). That is, prompting participants to report what they are thinking may introduce additional cues in working memory. This may lead to the retrieval of information from long-term memory (which otherwise would remain inactive) which may push current information out of working memory, disturbing and potentially changing the process (Van Someren, Barnard, & Sandberg, 1994).

As these thought-elicitation methods possess important advantages and disadvantages, we decided to use both the thought-listing and the think-aloud method to tap children’s defense responses and explore whether there are any differences in the way they effect children’s processing of television advertising.

**Method**

**Participants**

A total of 163 children between the ages of 8 and 12 participated in the study (8-9 years: \( n = 81 \); 11-12 years: \( n = 82 \)). Children were recruited from six elementary schools located in various regions of the Netherlands, thus incorporating pupils from a variety of socio-economic and cultural backgrounds. The sample consisted of 82 boys (50%) and 81 girls (50%).
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Materials and Procedure

We compiled a short video compilation including a fragment of the popular Dutch youth television series Spangas, followed by a program-commercial separator, a television commercial for a doll named Baby Sofie and a commercial for Lays chips. To render the viewing situation as natural as possible, we included a program-commercial separator that is typically used on the television channel broadcasting Spangas. The program fragment was 40 seconds in length, the program-commercial separator was 7 seconds, and the commercials were 20 seconds each.

Prior to data collection, institutional approval and parental and child informed consent were obtained. Children were informed that the study was about television and advertising and that they could stop participating at any time. None of the children refused to participate. Children were randomly assigned to one of two thought-elicitation groups: think-aloud ($n = 82$) or thought-listing ($n = 81$) and were interviewed individually in a quiet room in their school by a female interviewer.

Think-aloud. At the beginning of the session, the interviewer informed the children that she was very interested in their thoughts when they are watching television. The children then engaged in a short task to familiarize themselves with the process of think-aloud (Eveland & Dunwoody, 2000; Lodge, Tripp, & Harte, 2000). Following this, they were shown the video compilation on the interviewer’s notebook. Prior to viewing, the interviewer instructed the children to report aloud everything that they were thinking while watching the video. Children who remained silent for 5 seconds during viewing were given a standard prompt: “What are you thinking right now?”; cf., Lodge, Tripp, and Harte, 2000).

Thought-listing. As before, the interviewer began the session by telling the children that she was very interested in their thoughts when they are watching television. The children then engaged in a short task to familiarize themselves with the process of thought-listing (Eveland & Dunwoody, 2000; Lodge, Tripp, & Harte, 2000). They were then exposed to the video compilation on the interviewer’s notebook. Following viewing, the children were asked: “Can you tell me everything you were thinking while you were watching the
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film?” Standard prompts were provided if the children failed to respond within 5 seconds (“Were you thinking anything?”). If the child gave an affirmative answer the interviewer asked “What were you thinking?”; Lodge, Tripp, and Harte, 2000).

Immediately following the think-aloud or thought-listing interview, all children were asked to complete a survey. Within this survey, several questions were asked about the last commercial they saw in the video compilation (Lays chips commercial). These questions established the children’s skepticism and liking of the commercial and their attitude towards the brand. The entire session took around 30 minutes. All children were given a small present for their participation.

Coding of Thoughts

Initially, we grouped children’s verbalizations into segments representing ‘thoughts’ by defining meaningful units (cf. Blackwell, et al., 1985; Lodge et al., 2000; Van Someren et al., 1994). Meaningful units refer to verbalizations containing one line of reasoning, one specific argument, or statement. Secondly, we developed a coding scheme that could be used to categorize these meaningful units (i.e., thoughts). Based on earlier studies (e.g., Brucks et al., 1988; Zuwerink & Devine, 1996), four initial coding dimensions were developed. The four dimensions were (1) relevance of thought (i.e., relevant or irrelevant), (2) origin of thought (i.e., message-originated or recipient-generated), (3) nature of thought (i.e., cognitive or affective), and (4) polarity of thought (i.e., positive, negative, or neutral). In addition, in order to assess children’s explicit use of their conceptual advertising literacy (i.e., understanding of advertising’s intent and use of persuasive tactics) a fifth coding dimension was added (5) advertising understanding (i.e., understanding or no understanding). Categories within each coding dimension were mutually exclusive. Relevant statements only were coded on origin, nature, polarity, and advertising literacy. Definitions and examples of the categories within each coding dimension can be found in Table 1.

All thoughts were coded by two independent judges and inter-coder reliability was calculated using Cohen’s Kappa (1960). Kappa’s indicated substantial inter-coder agreement (Landis & Koch, 1977) as follows; .68 for relevance of thought, .77 for origin of thought, .80 for nature of thought, .74 for
polarity of thought, and .67 for advertising literacy. A third judge coded independently all thoughts on which the first two judges disagreed and discrepancies were resolved via three-way discussion.

Measures

Cognitive defense responses. The coding process revealed two types of cognitive defense responses: (1) conceptual cognitive responses (i.e., cognitive responses explicitly expressing an understanding of advertising’s intent or tactics used), and (2) negative cognitive responses (i.e., cognitive responses which are negative about the commercial or advertised brand). Both measures were created by collapsing categories. More specifically, the conceptual cognitive responses measure was created by totaling all relevant, recipient-generated, cognitive thoughts that explicitly expressed an understanding of advertising’s intent and/or persuasive tactics. Following earlier work on cognitive defense responses (e.g., Brucks et al., 1981; Jacks & Cameron, 2003; Zuwerink & Devine, 1996), the negative cognitive responses measure was created by totaling all relevant, recipient-generated, negative cognitive thoughts and then subtracting all relevant, recipient-generated, positive cognitive thoughts.

On average, the children produced a total of .10 conceptual cognitive responses (range = 0 - 3; SD = .39) and .12 negative cognitive responses (range = 0 - 2; SD = .39). Note that the latter value is a net value calculated by subtracting the total number of positive from the total number of negative thoughts. There were no significant differences in the number of cognitive defense responses elicited by children in the thought-listing versus the think-aloud group; conceptual cognitive responses, \( t(161) = .97, p = .33, \eta^2 = .006 \) and negative cognitive responses, \( t(161) = .98, p = .33, \eta^2 = .006 \).

Affective defense responses. As for the cognitive defense response measures, the affective defense response measure (i.e., affective responses which are negative about the commercial or advertised brand) was created by collapsing categories. More specifically, a negative affective responses measure was created by totaling all relevant, recipient-generated, negative affective thoughts and subtracting all relevant, recipient-generated, positive affective thoughts (Zuwerink & Devine, 1996).
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On average, the children produced a total of .10 negative affective responses (range = -2 - 4; SD = .84). Again, note that this value is a net value calculated by subtracting the total number of positive from the total number of negative thoughts. There were no significant differences in the number of negative affective responses elicited by children in the thought-listing versus the think-aloud group, t(161) = 1.21, p = .23, eta² = .009.

Skepticism toward the commercial. To measure skepticism toward the Lays chips commercial, Obermiller and Spangenberg’s (1998) ad skepticism scale was adapted for use with children. The scale contained seven items reflecting children’s tendency toward disbelief in advertising (e.g., Do you think the Lays chips commercial tells the truth?; Do you think you can believe the Lays chips commercial?). Response options were 1 (yes, for sure), 2 (yes, I think so), 3 (no, I don’t think so), and 4 (no, certainly not). A total scale was constructed by averaging scores on the seven items (α = .77; range = 1-4; M = 2.26, SD = .47).

Liking of the commercial. To measure liking of the commercial, children were asked to indicate on a 4-point scale how much they liked the Lays chips commercial using five items (e.g., Do you think the Lays chips commercial is funny?; Do you think the Lays chips commercial is boring?). Response options were 1 (no, not at all), 2 (no, not really), 3 (yes, a little bit), and 4 (yes, very much). A total scale was constructed by averaging scores on the five items (α = .85; range = 1-4; M = 2.32, SD = .70).

Attitude toward the brand. To measure brand attitude, children were asked to indicate on a 4-point scale how much they liked Lays chips (e.g., Do you like Lays chips?; Do you think Lays chips are great?), using six items based on Pecheux and Derbaix’s (1999) brand attitude scale. This scale is particularly suited to children aged 8 to 12. Response options were 1 (no, not at all), 2 (no, not really), 3 (yes, a little bit), and 4 (yes, very much). A total scale was constructed by averaging scores on the six items (α = .71; range = 1-4; M = 2.49, SD = .48).
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Results

Preparatory Analyses

To investigate whether the pattern of results was as expected, zero-order correlations were computed between all variables in the model (see Table 1). As anticipated, cognitive defense responses (i.e., conceptual cognitive responses and negative cognitive responses) were positively related to skepticism toward the commercial, and affective defense responses (i.e., negative affective responses) were negatively related to liking of the commercial. Further, skepticism toward the commercial was negatively related, and liking of the commercial was positively related, to attitude toward the advertised brand. Finally, a significant negative relation was found between skepticism and liking of the commercial.

Table 1  Zero-Order Correlations for all Variables

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<td>3. Negative affective responses</td>
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<td>.02</td>
<td>-</td>
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<td>4. Skepticism toward the commercial</td>
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<td>.18*</td>
<td>.10</td>
<td>-</td>
<td></td>
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<td>5. Liking of the commercial</td>
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<td>-.19*</td>
<td>-.38***</td>
<td>-.42***</td>
<td>-</td>
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<td>6. Attitude toward the brand</td>
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<td>-.16*</td>
<td>-.11</td>
<td>-.39***</td>
<td>.34***</td>
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Notes. *p < .05. **p < .01. ***p < .001.

Structural Equation Modeling Analyses

The hypothesized paths between children’s cognitive and affective defense responses and their brand attitude were investigated using the structural equation modeling program AMOS 17 (Arbuckle, 2008). The structural equation analysis was based upon three independent variables (conceptual cognitive responses, negative cognitive responses, and negative affective responses), two mediating variables (skepticism and liking) and one dependent variable (attitude toward the advertised brand). To indicate the fit between the data and the specified model, three model fit indices were used: The $\chi^2$-test, the comparative fit index (CFI), and the root mean square error of approximation index (RMSEA). The model
would be supported with a nonsignificant $\chi^2$, a CFI value of .95 or more, and a RMSEA value of .05 or less, with $p$-close > .05 (Browne & Cudeck, 1992; Byrne, 2001).

The hypothesized model fit the data well, $\chi^2(6, N = 163) = 8.59, p = .20$; CFI = .97; RMSEA = .05 with $p$-close .42. The observed model is presented in Table 2. All six causal paths specified in the hypothesized model were found to be statistically significant (one-tailed, .10 significance level). These six paths represented the relations between (1) conceptual cognitive responses and skepticism ($\beta = .14, B = .17, SE = .09, p < .10$), (2) negative cognitive responses and skepticism ($\beta = .15, B = .18, SE = .09, p < .10$), (3) negative affective responses and liking ($\beta = -.34, B = -.28, SE = .06, p < .001$), (4) skepticism and liking ($\beta = -.39, B = -.56, SE = .10, p < .001$), (5) skepticism and brand attitude ($\beta = -.30, B = -.30, SE = .08, p < .001$), and (6) liking and brand attitude ($\beta = .22, B = .15, SE = .05, p < .01$). The model explained 19% of the variance in brand attitude.

**Figure 2.** Structural equation model of children’s advertising defenses.

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<table>
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<th>Attitude toward the ad</th>
<th>Advertising susceptibility</th>
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<td>Skepticism</td>
<td>Attitude toward the advertised brand</td>
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<tr>
<td>Negative cognitive responses</td>
<td>Liking</td>
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<td>Negative affective responses</td>
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**Note.** Coefficients represent standardized beta weights, all significant at least at $p < .10$.

To investigate whether the paths to reduced advertising susceptibility differed according to the thought elicitation method used (think-aloud versus thought-listing), a multigroup analysis was conducted (Byrne, 2001). Evidence for differences between two groups is found when the unconstrained model (i.e.,
parameters are free to differ across both groups) demonstrates a better fit than the constrained model (i.e., parameters are equal across both groups). A chi-square difference test checks for significant differences between the two models. Our chi-square difference test, $\chi^2_{\text{change}}(6, N = 163) = 11.85, p < .10$ ($p = .07$), revealed that the unconstrained model, $\chi^2(12, N = 163) = 8.08, p = .78$; CFI = 1.00; RMSEA = .00 with p-close .94, provided a better fit than the constrained model, $\chi^2(18, N = 163) = 19.93, p = .34$; CFI = .977; RMSEA = .03 with p-close .73. This suggests that the model does not fit children in the thought-listing and think-aloud group equally well.

To ascertain which structural paths differed for the two groups, we analyzed the invariance of each structural path separately, while retaining the specified equality constraints of previously established invariant parameters (i.e., the measurement weights; Byrne, 2001). Two structural paths differed significantly between the groups; (1) the path from negative cognitive responses to skepticism, and (2) the path from skepticism to brand attitude, $\chi^2_{\text{change}}(2, N = 163) = 11.04, p < .01$. For children in the think-aloud group, negative cognitive responses increased their skepticism toward the commercial ($\beta = .32, B = .34, SE = .11, z = 3.047, p < .01$) which, in turn, decreased their brand attitude ($\beta = -.43, B = -.48, SE = .11, z = -4.198, p < .001$). However, for children in the thought-listing group, negative cognitive responses had no impact on their skepticism toward the commercial ($\beta = -.06, B = -.08, SE = .15, z = -.530, ns$). Moreover, skepticism did not decrease significantly their brand attitude ($\beta = -.15, B = -.14, SE = .11, z = -1.273, ns$).

**Discussion**

The aim of this study was to ascertain how 8- to 12-year-old children’s defense responses, during exposure to television advertising, can reduce their susceptibility to advertising’s effects. In addition, we compared the defense paths for two thought-elicitation methods; think-aloud and thought-listing. We developed and tested a model explaining how cognitive and affective defense responses may reduce children’s attitude toward the advertised brand, by enhancing skepticism and decreasing their liking of the commercial.
Mechanisms of Children’s Defense Responses

In accordance with our expectations, children’s cognitive defense responses (i.e., conceptual cognitive responses and negative cognitive responses) increased their skepticism toward the commercial which, in turn, reduced their attitude toward the advertised brand. Additionally, children’s affective defense responses (i.e., negative affective responses) reduced their liking of the commercial which, in turn, reduced their attitude toward the advertised brand. Thus, both the cognitive and affective defense paths were effective in reducing children’s susceptibility to advertising’s effects. This implies that cognitive and affective mechanisms play an important role not only in establishing persuasion (e.g., Batra & Ray, 1986; Burke & Edell, 1989; Homer, 2006; Vakratsas & Ambler, 1999), but also defending against it.

This study also indicated that the effectiveness of the defense paths differed between children in the thought-listing and the think-aloud groups. Specifically, for children in the think-aloud group both the cognitive and affective defense paths were successful in reducing susceptibility. However, for children in the thought-listing group the affective defense path only turned out to be effective. This suggests that each thought-elicitation method differentially affected children’s processing of the commercial. An explanation for this can be found in information processing theories (e.g., Lang, 2000; Roedder, 1981). Such theories suggest that there are three major sub-processes involved in processing mediated messages (e.g., television commercials): (1) encoding the message into working memory (i.e., the part of the brain where currently active information resides), (2) retrieval of relevant information from long-term memory into working memory (i.e., reactivation), and (3) application of retrieved information to the encoded content of the mediated message, resulting in new associations between concepts, which are then stored in long-term memory. Each of these sub-processes may be performed in either a cursory or thorough manner, dependent upon whether the message recipient is motivated and able to allocate sufficient cognitive resources to processing the message (Buijzen et al., 2010; MacInnis & Jaworski, 1988; Meyers-Levi & Malaviya, 1999).

In the present study, it is conceivable that prompting the children to think-aloud whilst viewing the commercial may have functioned as a cue to increase their motivation and ability to allocate greater cognitive resources to the three subprocesses involved in advertising processing (cf., Lang, 2000; Roedder,
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1981). Initially, prompting the children to think-aloud whilst watching the commercial may have increased their motivation to allocate more cognitive resources to encoding the commercial into working memory (sub-process 1). In other words, the prompts may have altered children’s goal from passively viewing the commercial to actively attending to the things they saw and heard. Likewise, prompts to think-aloud may have also increased children’s ability to allocate more resources to retrieval of previously stored relevant knowledge (i.e., advertising literacy) from long-term memory (sub-process 2). In addition, the prompts may have increased the resources available for children to apply their retrieved advertising literacy to the commercial (sub-process 3). That is, the prompts may have increased the children’s ability to critically evaluate the content of the commercial in light of their retrieved advertising literacy (i.e., produce conceptual and negative cognitive defense responses). In turn, this may have resulted in new associations about the commercial (i.e., skepticism toward it) and the advertised brand (i.e., less favorable brand attitudes) which were then stored in long-term memory.

While our results did indicate that children in the thought-listing group produced cognitive defense responses while watching the commercial, these responses were not effective in reducing their advertising susceptibility. An explanation for this finding is that these children did not allocate sufficient cognitive resources to all three sub-processes involved in advertising processing. They may have had enough resources available to encode the commercial and to retrieve their advertising literacy from memory (sub-processes 1 and 2), but may have failed to successfully apply this retrieved literacy to the content of the commercial. Thus, no new (less favorable) associations about the commercial and advertised brand were formed and stored in long-term memory (sub-process 3). Based on this explanation, we could conclude that compared to thought-listing, the think-aloud method stimulated children to allocate more cognitive resources to the third sub-process (i.e., application). In other words, although the children were able to autonomously retrieve their previously stored advertising literacy during commercial exposure, they were unable to successfully apply this retrieved advertising literacy as a critical defense unless triggered by a cue (i.e., prompted to think aloud).

However, this conclusion should be interpreted with caution as an alternative explanation could be that children in the thought-listing group reported false memories (i.e. thoughts that did not actually appear while watching
the commercial were retrieved as if they did). One disadvantage of the thought-listing technique is that providing retrospective reports may be difficult for 8- to 12-year-old children. The children may have struggled to recollect their thoughts while viewing the commercial and reported their thoughts at the moment of questioning instead (i.e., post-hoc rationalization and reconstruction; Van Someren et al., 1994). The prompts to report the thoughts they had while watching the video may have functioned as a cue which triggered the children to retrieve previously stored knowledge from memory (i.e., advertising literacy and commercial information), which was then used to construct their responses. This may have given the false impression that children in the thought-listing group constructed as many defense responses as children in the think-aloud group. Following this logic, we could conclude that compared to thought-listing, the think-aloud method stimulated children to allocate more cognitive resources to the second (i.e., retrieval) and third sub-processes (i.e., application) involved in advertising processing. This suggests that the children were unable to retrieve and apply their advertising literacy as a critical defense during advertising exposure, unless they were triggered by a cue (i.e., prompted to think aloud).

Finally, and of particular relevance, the affective defense mechanism was effective not only in reducing advertising susceptibility for children in the think-aloud group, but also for children in the thought-listing group. One explanation for this is that children are less dependent upon information processing capacities (i.e., available cognitive resources) for negative affective responses to become a successful defense, as they may operate via less cognitively demanding mechanisms. That is, negative affective responses generated during commercial processing are typically transferred automatically to the advertised brand in the absence of thoughtful consideration of the commercial content (i.e., affect transfer; MacKenzie & Lutz, 1989, Schwarz & Clore, 1983). From this we can conclude that affective defense mechanisms may successfully reduce children’s advertising susceptibility even when children are unable to use (i.e., retrieve and apply) their advertising literacy to critically process a commercial.

Implications and Suggestions for Future Research

This study investigated children’s defense responses whilst processing a television commercial and noted that both cognitive and affective defense mechanisms may play an important role in reducing children’s susceptibility to
advertising effects. Our results also showed that the effectiveness of these defense mechanisms in reducing susceptibility varied according to the thought-elicitation method used. We can thus conclude that the two thought-elicitation methods differentially affected the way the children processed the advertising message, with the think-aloud method stimulating children’s level of cognitive processing compared to the thought-listing method.

This has important methodological implications for future research investigating children’s processing of advertising specifically, and also media more generally. When using the think-aloud or thought-listing method, that these approaches differ in the validity of the data they produce must be accounted for. On the one hand, the thought-listing method may provide invalid data due to memory errors. Our findings suggest that it may be difficult for children to accurately recollect their thoughts whilst viewing a commercial, which may lead to both incomplete and false reports. On the other hand, the think-aloud method may produce invalid data due to disturbances in cognitive processing. Our results indicated that prompting children to verbalize their thoughts whilst viewing a commercial increased their cognitive processing of the commercial. Although this disturbance effect turned out to be highly interesting for the present study, further research should explore how we can measure accurately the thoughts children have during media exposure without influencing cognitive processing.

Our findings have important implications for the ongoing societal debate about children and advertising. In many Western societies, public and political attention is drawn increasingly toward methods of reducing children’s advertising susceptibility, such as education programs aimed at increasing advertising literacy and consumer skills. Earlier studies have demonstrated that such programs can successfully stimulate advertising literacy (Brucks et al., 1988; Donohue, Henke, & Meyer, 1983; Feshbach, Feshbach, & Cohen, 1982; Hobbs & Frost, 2003; Roberts et al., 1980). However, research investigating the link between literacy and advertising’s effects suggest that increased advertising literacy does not necessarily enable children to defend themselves against advertising (Chernin, 2007; Rozendaal, Buijzen, & Valkenburg, 2009).

It has been argued that advertising literacy may be effective in reducing advertising susceptibility when children are triggered to utilize this knowledge (Brucks et al., 1988; Buijzen, 2007; Roedder, 1981). For instance, Buijzen (2007) found that children’s susceptibility to television commercials was reduced when
they were provided with fact-based comments during exposure. Specifically, providing facts about the commercial and the advertised product stimulated children’s advertising understanding and commercial skepticism, which negatively influenced their intention to ask for the advertised product. The present study showed that even a non-instructive intervention (thought-triggering) can effectively reduce children’s advertising susceptibility. This is of interest to parents and other caretakers who can provide comments about advertising whilst watching television with children (Boush, 2001; Buijzen & Valkenburg, 2005; Buijzen, Rozendaal, Moorman, & Tanis, 2008). Specifically, to help children defend against advertising, parents could encourage them to think about what they see and hear whilst watching television commercials.

Finally, our study showed that affective defense mechanisms can successfully reduce children’s advertising susceptibility even when they are not motivated or able to process a commercial thoroughly (e.g. due to limited cognitive abilities). Therefore, interventions aimed at reducing children’s advertising susceptibility should focus not only on stimulating cognitive defenses, but also on increasing affective advertising defenses. For instance, education programs could explicitly question advertising’s entertainment value in order to install less favorable advertising attitudes. Increasingly, many Western societies are encouraging the development of advertising intervention programs as a strategy to counteract advertising’s influence. It is thus of great societal and political importance to understand what types of interventions (in terms of form and content) may be most beneficial in helping children to defend themselves against the persuasive appeal of advertising.

References


Chapter 5


Cognitive and Affective Defense Mechanisms


Chapter 5

2005, from the American Psychological Association web site:


Cognitive and Affective Defense Mechanisms


### Appendix 1 Definitions and Examples of Coding Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition/Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevance of thought</strong></td>
<td></td>
</tr>
<tr>
<td>Relevant</td>
<td>Thoughts related to the commercial, product class, advertised product/brand, or advertising in general (e.g., “I like potato chips”).</td>
</tr>
<tr>
<td>Irrelevant</td>
<td>Thoughts not related to the commercial, product class, advertised product/brand, or advertising in general (e.g., “My sister is very sweet”).</td>
</tr>
<tr>
<td><strong>Origin of thought</strong></td>
<td></td>
</tr>
<tr>
<td>Message-originated</td>
<td>Restatement or paraphrase of verbal or pictorial content of the commercial. Little or no use of prior knowledge (e.g., “A boy and girl are playing together”).</td>
</tr>
<tr>
<td>Recipient-generated</td>
<td>Reactions to, qualifications of, or illustrations of the content of the commercial. Uses some memory of commercial and/or prior knowledge (e.g., “Those kids look a bit silly”).</td>
</tr>
<tr>
<td><strong>Nature of thought</strong></td>
<td></td>
</tr>
<tr>
<td>Cognitive</td>
<td>Thoughts that express pertinent beliefs about the commercial, product class, advertised product/brand, or advertising in general (e.g., “Potato chips are unhealthy”).</td>
</tr>
<tr>
<td>Affective</td>
<td>Thoughts that express pure affect toward the product, ad, communicator, or other relevant object or issue (e.g., “Stupid!”).</td>
</tr>
<tr>
<td><strong>Polarity of thought</strong></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Favorable thoughts (e.g., “I like this commercial”).</td>
</tr>
<tr>
<td>Negative</td>
<td>Unfavorable thoughts (e.g., “I do not like this commercial”).</td>
</tr>
<tr>
<td>Neutral</td>
<td>Thoughts that are neither favorable nor unfavorable (e.g., “Now a commercial comes on”).</td>
</tr>
<tr>
<td><strong>Advertising literacy</strong></td>
<td></td>
</tr>
<tr>
<td>Understanding</td>
<td>Thoughts explicitly expressing an understanding of advertising’s intent and/or persuasive tactics used (e.g., “They want kids to ask their parents to buy potato chips for them”).</td>
</tr>
<tr>
<td>No understanding</td>
<td>Thoughts that do not explicitly express an understanding of advertising’s intent and/or persuasive tactics used (e.g., “I always feel annoyed when a commercial comes on”).</td>
</tr>
</tbody>
</table>