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Shedding New Light on How Advertising Literacy Can Affect Children's Processing of Embedded Advertising Formats: A Future Research Agenda — [Source link](#)

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Shedding a New Light on How Advertising Literacy can Affect Children's Processing of Embedded Advertising Formats: A Future Research Agenda

Abstract

Advertisers are continuously searching for new ways to persuade children, thereby fully integrating commercial content into media content, actively engaging children with the commercial content, and enlarging the amount of commercial messages a child is confronted with at one moment in time. This poses a challenge for how children cope with embedded advertising. This conceptual paper aims to develop a theoretically grounded framework for investigating how children process embedded advertising. More precisely, it sheds a light on previous research and conceptualizations of advertising literacy and provides suggestions for future research. In particular, attention is devoted to conceptual and methodological issues, as well as to the need for research on how to improve children's coping with embedded advertising, by emphasizing the value of persuasive intent priming and implementation intentions. To conclude, future research directions are discussed regarding strategies to strengthen children's dispositional (i.e. associative network consisting of cognitive, moral and affective beliefs related to advertising) and situational (i.e. actual recognition of and critical reflection on advertising) advertising literacy, and their coping skills.

Keywords: Advertising literacy, children, embedded advertising formats, dispositional advertising literacy, situational advertising literacy, implementation intentions, persuasive intent priming

Big companies such as Viacom, Hasbro, Mattel and Jumpstart have recently been fined \$835,000 for the illegal tracking of children's websites (Brandom, 2016). A recent analysis of 72 websites targeting children revealed that no less than 179 data brokers track children's behaviors (Martijn & Tokmetzis, 2016), from which the resulting data are used by advertisers to target children more effectively. This illustrates that advertisers are constantly searching for clever ways to persuade children to buy their products or convince their parents to purchase them. Next to traditional television commercials, advertisers currently focus heavily on the use of *embedded* advertising formats, both offline and online. These formats (such as advergames or brand integrations in for instance music videos or television shows) are characterized by a more subtle, less intrusive commercial nature. Commercial messages are integrated in or merged with the media content, and interactively engage their users with this commercial content. This has not only led to more entertaining and fun but also more cognitively demanding advertising practices (e.g. simultaneous exposure to multiple advertisements, or to both media and ad content) which distract the users from systematically and critically processing the commercial content (Lee and Faber 2007; Panic et al. 2013).

Systematic and elaborate processing of commercial content will only occur when both motivation and ability to process this content are high (Petty and Cacioppo 1986). In that case, individuals will use previously stored knowledge to evaluate the message and formulate pro- and counterarguments related to this message. An individual's knowledge of and skills related to persuasion (i.e. advertising literacy, in the context of advertising) comes into play here. Advertising literacy refers to all advertising-related knowledge and skills children have (i.e., dispositional advertising literacy) and their ability to recognize and critically reflect on advertising (i.e., situational advertising literacy). More specifically, advertising literacy is assumed to function as a 'filter' or 'radar', enabling consumers to evaluate the persuasion attempt critically (Friestad and Wright 1994). However, compared to adults, children's advertising literacy is believed to be precariously underdeveloped, and especially in the case of the current embedded advertising context (An, Jin and Park 2014; Hudders, Cauberghe and Panic 2015; Verhellen et al. 2014). Children do not only have limited knowledge about these embedded formats, but, equally important, the characteristics of these formats also lower their ability and motivation to recognize the commercial content and critically

reflect on it (Nairn and Fine 2008). First, their ability is lowered because commercial messages are now integrated in an environment with huge amounts of information (i.e., children are simultaneously exposed to media content and commercial message(s)). This information overload leads to a high cognitive load (which is defined as the total amount of mental resources required to perform a certain task (Paas and Van Merriënboer 1994)), and this requires a high level of self-regulation for children to focus attention and distinguish relevant from irrelevant content. As the latter induces depletion of self-regulatory resources, this implies that children will have more difficulties to critically reflect on commercial content. Second, their motivation is lowered due to the fun nature of the new advertising formats (as the commercial message is integrated in fun and exciting games, for instance).

This paper aims to develop a theoretically grounded framework for investigating how children process embedded advertising, to provide guidance for future research. In particular, the paper explains the crucial role of dispositional and situational advertising literacy in assisting children to cope with advertising, and identifies strategies (using heuristic and automatic processes) that can improve both literacies in an embedded advertising context. These strategies involve the learning of skills needed to trigger specific heuristics which may in turn activate the relevant parts of the associative network (dispositional advertising literacy), in order to successfully (and ideally automatically) apply and use relevant knowledge when actually confronted with advertising (situational advertising literacy). The paper provides a number of avenues for future research following from the proposed conceptual model, and stresses the need to investigate further how automatic mechanisms can be applied to improve children's critical processing of embedded advertising formats. In conclusion, the paper reflects on how these mechanisms can be implemented in existing strategies that are currently used to improve children's advertising literacy, namely advertising disclosures, advertising literacy training sessions, and parental mediation strategies.

The focus of the paper lays on children under sixteen as this is the age that should match an adult-like processing of advertising (John 1999). However, as sixteen-year-old children can be (and are) different from e.g. six-year-olds when processing advertising, we emphasize possible age differences throughout the manuscript and explain the antecedents and consequences of this age effect

thoroughly. In particular, the paper deciphers the construct of advertising literacy in light of children's limited cognitive, emotional and moral abilities on top of the specifics of embedded advertising formats that make it even more difficult to grasp advertising.

UNDERSTANDING HOW ADVERTISING LITERACY CAN AFFECT CHILDREN'S PROCESSING OF EMBEDDED ADVERTISING - A CONCEPTUAL MODEL

Children's Processing of Advertising

Buijzen, Van Reijmersdal and Owen (2010) developed a framework which explains children's processing of commercial content (PCMC model). In this model, a distinction is made between three types of processing, i.e. systematic (high elaboration), heuristic (moderate elaboration) and automatic (low elaboration) processing. According to the PCMC, the level of elaboration will depend on the fit between required and allocated resources to process a persuasive message. High elaboration (and thus systematic processing) will only occur when both allocated and required resources to process a persuasive message are high. In the other cases, heuristic or automatic processing will occur. Heuristic processing implies that people are influenced by simple decision rules (e.g. a high price implies a high quality (Gigerenzer 2008)).

When automatic processing occurs, individuals are not elaborating the message elements, but are seduced by peripheral cues. In this case, persuasion occurs in an implicit and automatic way, through affect-based learning mechanisms, such as evaluative conditioning, mere exposure, and preconscious emotional associations induced by the fun and entertaining media context (Chartrand 2005; De Houwer, Thomas and Baeyens 2001; Dijksterhuis et al. 2005; Evans and Park 2015). In fact, the limited capacity model of message processing (Lang 2000) suggests that individuals only have limited resources to process a message and that these resources need to be subdivided into three underlying processes of information processing, namely message encoding, storage and retrieval. Accordingly, the instances in which a child will process the media content in a systematic way will be

limited. Children may only protect themselves from subconscious persuasion by activating their advertising literacy when exposed to advertising. This advertising literacy will counter the affect transfer that occurs between the context and the brand.

However, children's critical processing of advertising messages will be complicated by both the nature of embedded advertising formats and the fact that advertising literacy develops according to age. Before elaborating on ways to stimulate their advertising literacy in an embedded advertising context (cf. future research agenda), we propose a conceptual model in which we suggest how advertising literacy should come into play when children are processing advertising messages, and identify the issues that may arise in this context.

Conceptual Model of the Role of Advertising Literacy in Children's Processing of Advertising

The proposed conceptual model (see figure 1) suggests that advertising literacy needs to be triggered when children are exposed to persuasive messages in order to counterbalance the automatic affective reactions evoked by the fun and entertaining character of current advertising formats (*affect transfer mechanism*). Advertising literacy refers to an individual's knowledge, abilities and skills to cope with advertising (Boush, Friestad and Rose 1994). Friestad and Wright (1994) differentiate between *declarative/factual knowledge*, defined as the domain-specific content knowledge (here: related to market principles); and *procedural knowledge*, defined as the knowledge on how to perform certain activities as acquired through inferences from existing declarative/factual knowledge. Although studies on children's advertising literacy rarely distinguish between both types of knowledge, we follow recent insights in research on children's advertising literacy (Rozendaal et al. 2011; Waiguny, Nelson and Terlutter 2014) by explicitly discerning dispositional (cf. factual knowledge) from situational (cf. procedural knowledge) advertising literacy.

The model suggests that when being exposed to embedded advertising, children's *situational advertising literacy* should be activated. This situational advertising literacy refers to the thoughts and actions an individual undertakes in direct anticipation of a persuasive attempt, as well as during or

after advertising exposure. It refers to 1) the recognition of a persuasive attempt, and 2) the critical reflection on this attempt, the first being a prerequisite for the activation of the latter. Critical reflection entails asking questions such as ‘What persuasive strategies have been used?’, ‘What impact does this specific strategy has on me?’, ‘Is this specific strategy appropriate to use?’.

Children’s critical reflection on the persuasive message they are exposed to will be based on the retrieved cognitive, affective and moral *dispositional knowledge* stored in their associative network. This dispositional advertising literacy refers to the knowledge, skills and abilities consumers possess regarding persuasion in an advertising context. It is actually an associative network, or a *schemer schema* (Wright 1986). The associative network theory (Anderson and Bower 1973) approaches the human brain as a network of separate interconnected chunks of information (nodes). These nodes can either be semantic (i.e. refer to a subject, object or category) or emotional (i.e. refer to a feeling or emotional state) in nature (Bower 1981). Making an information chunk prominent will automatically trigger the network of interconnected nodes through a network ‘spreading activation’ process. The stronger the network association, the easier it becomes to retrieve certain information or memories (Keller 1993). In other words, dispositional advertising literacy consists of an entity of information nodes related to advertising that can be activated when confronted with a persuasive attempt (Friestad and Wright 1994). These nodes have cognitive, affective and moral meanings related to advertising.

The ease with which children can activate the relevant information nodes of the associative network to critically reflect on the advertising they are confronted with depends on their *coping skills*. These coping skills are conceived as the crucial connection between dispositional and situational advertising literacy, or the ability “*to recognize, analyze, interpret, evaluate, and remember persuasion attempts and to select and execute coping tactics believed to be effective and appropriate*” (Friestad and Wright 1994). These skills determine the extent, speed and accuracy to which the relevant (cognitive, moral and affective) information nodes can be activated in the associative network (dispositional) and help individuals to activate the matching coping strategy when exposed to a certain

ad (situational). Hence, strengthening this facet will make the process of selecting the relevant coping strategy more automatic when being exposed to advertising.

INSERT FIGURE 1 ABOUT HERE

Extending the associative network related to advertising and learning how to apply it when confronted with advertising, however, requires a lot of cognitive abilities and skills. Accordingly, evidence suggests that children's advertising literacy develops according to age (Rozendaal, Buijzen, and Valkenburg 2010; Wright et al. 2005).

Development of Advertising Literacy among Children

Advertising literacy gradually develops throughout life, evolving from simple to more sophisticated and nuanced beliefs about persuasion (Friestad and Wright 1994). More specific, this evolution depends on 1) the development of cognitive and social abilities and 2) the socialization of the consumer (John 1999).

Several authors state that advertising literacy encompasses multiple skills concerning memory, cognitive resources and message-processing which are accumulated during childhood; being referred to as *cognitive development* (Brucks, Armstrong and Goldberg 1988; Rozendaal et al. 2011; Wright et al. 2005). Executive functioning skills (related to self-regulation, resistance to interference, attention, and working memory) are indispensable in this context (Moses and Baldwin 2005). These abilities enable individuals to exercise adequate control of cognitions, which allows for the critical evaluation of embedded advertising formats. In particular, one needs to be able to control his/her responses, thoughts and actions, in order to get around the persuasive nature of advertising and break through the affect transfer mechanism. In addition, one's ability to focus and regulate attention needs to be highly developed and one needs sufficient working memory capacity. The latter refers to the fact that individuals should be able to temporarily store information in the working memory that is immediately

accessible and can be used upon completion of complex tasks (Rozendaal et al. 2011). This executive functioning starts to develop during childhood, and continues to develop during adolescence (from twelve to eighteen years, with a peak in evolution at the age of fifteen years). This implies that children, who are not yet fully developed, will be less able to control inhibitions, and therefore more likely to immediately respond to the perceptually salient and appealing features of a commercial message. Furthermore, because these children have a hard time controlling their attention, they will be less able to shift their attention away from the affect-based components of the message and focus on their advertising literacy. Moreover, children with a low ability to control affect via emotion regulation will more likely be overwhelmed by the emotionally pleasing cues that predominate embedded advertising formats (Rozendaal et al., 2011).

Concerning information processing, one can distinguish between individuals as ‘limited processors’ (under the age of seven), ‘cued processors’ (age 7-11 years) and ‘strategic processors’ (age 12 and older) (John 1999). Whereas strategic processors have a set of strategies at their disposal to process information, cued processors need help (by the use of cues or prompts) for initiating this processing, and limited processors have problems to successfully process information in general. Such distinctions, however, are primarily based on the classic theory of cognitive development by Piaget (1929), in which children evolve from ‘perception is reality’-thinkers to more complex and abstract thinkers (John 1999). In later years, academics have called to take into account theory of mind (Moses and Baldwin 2005; Wellman and Gelman 1998; Young 1990), arguing that children will only be able to understand the specific intentions and goals of advertisers (and the differences with their own) when they are able to take into account the possible viewpoints of significant others (generally around the age of nine).

The perspective taking ability can be categorized as part of children’s *social abilities*, as well as the determining factor in one’s moral development (Moses and Baldwin 2005). However, in contrast with the extensive documentation on the development of knowledge about advertising’s commercial (i.e. selling and persuasive) intent, little is known about how perceptions of tactic appropriateness and deception develop (Moses and Baldwin 2005; Wright et al. 2005). This is in spite

of the fact that Friestad and Wright (1994) gave a clear impetus for further research, through citing early studies by Rule, Bisanz and Kohn (1985) on this topic. These authors claim that children's knowledge about 'interpersonal influence tactics' develops together with their understanding about what acceptable social behavior entails. These moral reflections develop when growing older, according to three stages (based on Kohlberg 1971): 1) learning the concept of self-interest, 2) developing a conception of 'relationship', and 3) the emergence of social welfare concepts, referring to tactic appropriateness judged in terms of altruism and moral rightness.

Next to these general processing skills, individuals need domain-specific content knowledge (related to market principles) which can be acquired through 'consumer socialization' (Moses and Baldwin 2005), i.e. the *'processes by which young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace'* (Ward 1974, p. 2). This socialization refers to trial and error processes in the coping with persuasive attempts (Friestad and Wright 1994), and advertising in particular. According to John (1999), it is a developmental process that consists of three stages: the perceptual (3-7 years), analytical (7-11 years) and reflective (11-16 years) stages. Only when children reach the analytical stage they are considered to be fully able to recognize commercial messages and to critically reflect upon it (for a complete overview, see John 1999, p. 204).

In other words, an individual's experience with the persuasive attempts he/she faces in daily life will greatly determine his/her development of advertising literacy. In particular, these situations help people to better understand how persuasion works, and which techniques are used to persuade individuals. In addition, advertising literacy is influenced by the alternation of roles one takes (e.g., in certain situations one is the agent who tries to influence a target, while in others one is the target who is influenced by an agent (Friestad and Wright 1994). Next to these individual experiences, people are influenced by their perception of how others (e.g., parents, peers, media, etc.) cope with advertising (Friestad and Wright 1994), and by the *values and norms that reside in the culture* they are living in.

Ultimately, these socialization processes help to build people's associative network (i.e. dispositional advertising literacy) and to improve their coping skills. The maturation of cognitive and social abilities in turn facilitates the development of this advertising knowledge and skills (and thus

how much one learns from socialization); it is thus a bidirectional process (Moses and Baldwin 2005). In addition, these processes imply that actual coping skills will become increasingly refined, accurate and automatic throughout an individual's life (Friestad and Wright 1994). As a result, the simple if-then rules will be replaced by progressively complex, abstract and refined coping tactics (Friestad and Wright 1994). These complex coping tactics, in turn, make it increasingly easier for individuals to cope with persuasive attempts, as they decrease the cognitive effort one needs to recognize and reflect on persuasive attempts and to decide on how to cope with them. As such, through the transition process in abilities and experience (which goes slow and develops based on continuing practice) coping becomes a more automatic process.

It seems reasonable to conclude that, as the road toward effective coping with advertising is clearly a long and laborious one, children's advertising literacy is per definition underdeveloped. On top of that, the context of embedded advertising makes it even more difficult for them to critically reflect on advertising and build an appropriate associative network. The issues that may arise when children are exposed to embedded advertising are elaborated upon below, according to the different facets within the advertising literacy construct.

Unraveling the Dimensions of Advertising Literacy in the Context of Embedded Advertising

Dispositional Advertising Literacy

First, and foremost, children need a comprehensive associative network related to advertising that they can address when confronted with embedded advertising. The proposed model suggests that this associative network consists of information nodes entailing cognitive, moral and affective associations related to advertising.

Since the 70s, advertising literacy has mainly been approached from a *cognitive perspective* (for an overview, see Wright, Friestad and Boush 2005). In particular, the **cognitive** components of **advertising literacy** have been operationalized as the ability to recognize advertising, to understand its selling intent (i.e. to convince people to buy the advertised product) and persuasive intent (i.e. to

implicitly or indirectly influence consumers' behavior by altering their mental states), and to understand its persuasive tactics (i.e. to see through the specific techniques that are used to promote the advertised product). In the literature, at least two additional cognitive components can be identified that are operationalized less frequently, namely the ability to recognize the source of advertising (i.e. knowing who pays for the ad) and to identify the audiences an advertisement is targeted toward (i.e. understanding the principles of customer segmentation).

However, next to this cognitive component, a moral dimension should be distinguished.

Moral advertising literacy reflects individuals' ability to develop thoughts about the moral appropriateness of specific advertising formats, and comprises the general moral evaluations individuals hold toward these formats (e.g., advergames, brand placement or TV commercials) and advertising in general, and toward its persuasive tactics (e.g., humor or celebrity endorsements, using personal data to customize commercial messages). This dimension is deeply intertwined with the ability to notice when advertising is biased (e.g. when advertising makes products better than they are in reality) or does not tell the truth (referred to as skepticism by Rozendaal et al. 2016). While this dimension has not yet explicitly been integrated in recent literature about children's advertising literacy, its importance was already emphasized by Friestad and Wright (1994) in their seminal persuasion knowledge paper, where they addressed the necessity of including beliefs about the appropriateness of marketers' tactics in the persuasion knowledge construct. The nature of an individual's moral dispositions toward advertising also depends on his/her incorporation of the prevailing values and norms in society. This can be illustrated by the finding of Lee, Sung and Choi (2011) that Korean adolescents perceive product placement as more unethical and misleading than American young adults. Another voice why the societal or cultural component might impact an individual's moral dimension of advertising literacy is reflected by the differences in governance and regulation in advertising across countries. While in some countries advertising targeting children is subject to several restrictions, in other countries the legislation and national (self-)regulatory framework is more lax (Gunter, Oates and Blades 2005), which might implicitly impact consumers' perceptions of the appropriateness of advertising. The ability to evaluate advertising in a moral manner

and the possession of a set of moral dispositions toward advertising and its various techniques is more relevant than ever, considering the fact that the bulk of the nontraditional advertising formats can in many cases be described as covert marketing.

A third component of dispositional advertising literacy is **affective or attitudinal dimension of advertising literacy**, as recently proposed by Rozendaal et al. (2011) and Rozendaal et al. (2016). Essential to this concept, is the authors' emphasis on the importance of emotion regulation to counterbalance the affective reactions evoked by the persuasive messages. However, it should be noted that they did not address the knowledge and skills required to regulate these emotions. In particular, to be capable of suppressing and regulating emotional reactions, one should be aware and conscious of them. Hence, this emotional awareness depends primarily on people's knowledge of persuasive strategies evoking specific emotional reactions. When individuals have insights in the working of fear, humor, sex, warmth appeals, etc., they might be able to detect the emotional reactions evoked by these appeals, allowing them to regulate these emotions better. In addition, when individuals have insights in the working of embedded advertising formats, e.g. product placement relying on affect transfer mechanisms, they may be empowered to detect the persuasive impact on the moment of exposure. Similar for advergames, knowledge about the impact of this fun and interactive advertising format might increase the critical, situational processing of the persuasive message.

However, due to the nature of embedded advertising formats and their rapid evolution, children only have a limited associative network of attitudes and beliefs related to these formats and may experience difficulty applying them when confronted with embedded persuasive attempts. Preliminary research already suggests that dispositional advertising literacy is underdeveloped for the embedded advertising formats among children (e.g., Hudders et al. 2015; Panic et al. 2013; Rozendaal, Slot, et al. 2013; Verhellen et al. 2014). In particular, the expanded goals of embedded advertising formats are new to most people, implying that consumers are often left in the dark when it comes to knowledge about the commercial intent (e.g. eWOM encourages consumers to share the ad with friends, hence taking an active role in the commercial process without being aware of it). Further, as embedded formats usually do not disrupt the media content, they are not likely to be perceived as

advertising in the first place, which makes it difficult to develop a network of attitudes and beliefs related to advertising. Even if they recognize the advertising as such, children are likely to experience difficulties with disentangling their feelings and emotions toward the commercial content from those related to the media content. Moreover, although the embedded formats may raise more issues concerning fairness and appropriateness given their covert nature, children are less likely to have moral doubts about these practices since they lack an understanding of the tactics used.

Situational Advertising Literacy

Next to building an extensive associative network related to advertising, children also need to apply this knowledge when confronted to advertising to be able to critically reflect on it. In this regard, Moses and Baldwin (2005) emphasize the recognition of the persuasive attempt as the first precondition to activate critical processing of advertising. More specifically, recognizing an agent's action as a persuasion tactic will trigger the '*change-of-meaning*' process (Friestad and Wright, 1994). *If* consumers become aware of the possible usage of a persuasive tactic, *then* the change-of-meaning may lead consumers to '*disengage*' from the interaction with the agent (advertiser). This disengagement allows them to evaluate the tactics used in the advertisement (e.g. to make an assessment of the appropriateness of the tactic).

For this critical processing, children will rely on their dispositional advertising literacy by retrieving and activating the relevant (cognitive, affective and moral) information nodes within the associative network (Evans and Park 2015), which will then be used to make a critical assessment of the tactic, and ultimately, of the advertisement. However, even if children have the required advertising knowledge, it does not necessarily follow that they will actually retrieve this knowledge when confronted with advertising. In this context, Moses and Baldwin (2005) refer to the 'competence-performance' distinction, which relates to the fact that one may be (theoretically) capable (i.e. have the knowledge and competence) to apply advertising literacy, but also have difficulties to actually do it (i.e. performance). This is, children need a 'stop-and-think' response, since they are

required to shift their attention away from the advertisement (i.e. stop) and then actively process it and think about a cognitive script to help them cope with the advertisement. However, the subtle nature of embedded advertising increases the difficulty for young children to perform these ‘stop-and-think’ or ‘critical processing’ activities to a sufficient level at the actual time of exposure (Buijzen et al. 2010). In particular, this stop-and-think mechanism would not only imply that children would miss (part of) the media content, the recognition of embedded advertising is also difficult for children given the integration of commercial messages in the media content and the fun and engaging nature of these advertising formats. And, even if children overcome the difficulties in recognizing advertising, the critical reflection might be overshadowed by the fun character of the commercial content and some attractive benefits, increasing the personal relevancy accompanying some of these tactics. For instance, people’s possible opposition toward data collection practices of advertisers is often breached through incentives (e.g. free games, cool gadgets) that are hard to resist (especially for minors) (Earp and Baumer 2003). Accordingly, critical reflections are less likely to be induced.

Importantly, one should also consider the probability that children may activate parts of their associative network that are less pertinent in the case of being exposed to embedded advertising. For instance, Evans and Park (2015) argue that embedded advertising may not be recognized as such and that, accordingly, non-advertising schema will be triggered. Consequently, the advertisement will be processed as regular media content and no critical processing will occur. For instance, an advergame will most likely be processed as a game and not as an advertisement.

The critical reflection implies that individuals evaluate the advertisement on different aspects by asking themselves questions concerning 1) the persuasive strategies that have been used and their persuasive intent, 2) the emotional impact that this specific strategy can have, and 3) the appropriateness and fairness of the specific tactic used. Based on the outcome of this reflection, consumers may form new or refine existing attitudes toward the advertisement, advertiser (or brand) and advertised product (or topic). Depending on the situation (e.g., cognitive load, or timing), and the individual (e.g., expertise, level of dispositional advertising literacy) different coping strategies will be used (Friestad and Wright 1994). When consumers have gained certain expertise in coping with

persuasive messages they can apply more advanced, specialized strategies (e.g. making qualified judgments about the ad and its usefulness in their decision making process) compared to inexperienced consumers who will use simple rules (e.g. generalizations or ad avoidance).

Once an act performed by an agent is construed as a tactic, several types of effects may occur, which can correct the affect transfer mechanism. Importantly, situational advertising literacy can affect the direct impact of the attitude towards the advertisement on the attitude towards the brand either positively or negatively. On the one hand, the change-of-meaning process may lead to more defensive reactions. I.e., a general '*detachment*' effect may occur, which can happen when the thoughts about the persuasive intentions totally disrupt any other preceding brand or product related processing. In this scenario, the consumer becomes conscious that the agent sees him/her as a person on whom persuasion tactics can be applied, which is assumed to be experienced as "fundamentally off-putting" (Friestad and Wright 1994). The persuasion knowledge model does not elaborate on what is meant by "off-putting", yet we believe that reactance theory might provide an explanation. Simply put, reactance theory (Brehm 1989) implies that when individuals realize that they are subject to a persuasion attempt, they will perceive it as a threat to their autonomy and freedom of choice. In other words, people generally dislike being persuaded, because they want to be free to make own decisions. This may lead the consumer to discount not only the persuasion agent, but also the advertising message itself (for an overview of consumers' resistance strategies, see Fransen et al. 2015). However, following Evans and Park (2015), the outcome of this process may still be positive if the negative effect of situational advertising literacy on the advertising effects is smaller than the positive effect of the affect transfer of the media context. This may be especially the case with embedded formats (Evans and Park 2015). In addition, and although past studies mainly approached individuals' coping strategies as mitigating the persuasive impact of commercial messages, Friestad and Wright (1994) stressed that the outcome of the critical reflection should not be negative per se. For instance, as consumers reflect on a marketer's tactic in a specific advertisement, they may come to the conclusion that no deception is at play. Consumers may even embrace persuasion attempts as a form of inventive entertainment or a valuable source of information about products and services, or as a way to fuel the

economy and to lower the costs of media use (Briñol et al. 2015). Accordingly, this may strengthen the positive path of the affect transfer and result in an even more positive attitude towards the brand.

Coping Skills: The Link Between Dispositional and Situational Advertising Literacy

Coping skills refer to the crucial link between the knowledge stored in the associative network and the activation of this knowledge when being exposed to a specific ad. Coping skills can be strengthened in two ways: first, by extending the associative network, and second, by teaching individuals how to trigger the relevant nodes from this information network. More specifically, an individual's coping skills will be increased by developing cognitive, emotion regulation and social skills, and by socialization and experience, referring to trial and error processes in the coping with persuasive attempts, and advertising in particular (Friestad and Wright 1994). Friestad and Wright (1994) stress the importance of practice: when people recognize advertising as such, their responses may vary considerably during consecutive exposures to a particular advertising tactic, and stabilize as they applied the heuristic that seems most adaptive to them.

However, because everyday life is already saturated with advertising, advertisers have come up with new ways to promote the same advertising message through different techniques, made possible by the enormous potential of the digital media. This evolution implies, paradoxically, that experience with advertising is becoming less instructive. That is, in the case of e.g. traditional TV advertising, where 30"-commercials are neatly packed in blocks that clearly separate them from the surrounding media content, and are repeated several times a day, people can more easily learn by being exposed to the same type of advertising tactic in a short period of time. In addition, by comparing ads with neighboring ads, one can learn the various enactments of a general tactic, allowing them to try on several coping strategies until 'convergence' is reached. The embedded advertising formats, on the other hand, are of such a diverse and fleeting nature, that the probability of encountering a similar, known tactic in a short time range has lowered significantly. This prevents

people from developing more complex and abstract (and thus generalizable) coping strategies about specific advertising tactics.

Attitude toward advertising in general, and toward specific advertising formats

To conclude, the model takes into account children's attitude toward advertising in general and toward specific advertising formats. This construct can be described as a general set of *affective attitudes* (in terms of disliking, but also, as we like to emphasize, liking), consisting of an implicitly 'learned' set of norms and values related to the affective evaluation of advertising (formats).

Although the concept has been recognized in previous advertising literacy studies (Rozendaal et al. 2011; Rozendaal et al. 2016), it was approached as a dimension of attitudinal advertising literacy. However, defining affective attitudes as a form of 'literacy' gives rise to questions, as they do not reflect an individual's possession of insights, knowledge, facts or information about advertising tactics (though they can be the consequence). In addition, previous studies define the attitudinal advertising literacy dimension in terms of advertising (dis)liking which implies a clear direction (liking, positive; versus disliking, negative). However, in line with the Persuasion Knowledge Model, the present conceptual model claims that the outcome of the critical processing of the persuasive message can both be positive or negative depending on the evaluation of advertising tactics. Nonetheless, we do acknowledge the importance of these general attitudes toward advertising in influencing the overall processing of persuasive messages and the different dimensions of advertising literacy. In particular, a negative disposition towards advertising may lead to a more critical and elaborate processing of advertising messages compared to a positive stance. However, for embedded advertising formats, less irritation may be evoked as they do not interrupt media content and they are often fun and engaging. Accordingly, they may prevent children from applying their advertising literacy.

Importantly, a distinction should be made between these more general affective attitudes toward advertising (formats) and the attitude consumers hold toward a specific advertising message. The attitude toward the advertisement is a very specific situational affective reaction which is often automatically influenced (cf. PCMC; Buijzen, Van Reijmersdal and Owen 2010) by peripheral cues

(for instance those that make the advertisement fun). The general attitude toward advertising (formats), by contrast, is a more overall evaluation of persuasive and commercial content, and is not based on the situational exposure to one specific persuasive message and the brand it promotes or the tactic it uses.

Accordingly, when exposed to a certain advertising message, this implies the possibility of maintaining several sets of affective attitudes that diverge in valence (Briñol et al. 2015). For instance, individuals may dislike advertising in general, but at the same time be positive toward brand placement in movies. Or, they may have a positive attitude toward advertising in general, but hold a negative attitude toward a specific advertisement.

In sum, these difficulties in recognizing and critically reflecting upon embedded advertising formats combined with the fact that the consumer socialization process (by which they learn from exposure to these formats) evolves slowly, call upon new ways to increase children's advertising literacy.

HOW CHILDREN COPE WITH ADVERTISING – A RESEARCH AGENDA

The current paper provides guidance for future research and sets out a number of avenues to improve children's coping with advertising by enlightening the crucial role of advertising literacy.

To start with, possible research allies related to the proposed model are discussed, followed by the proposition of two strategies that may increase children's critical processing of embedded advertising formats. To conclude, this paper reflects on how these strategies can be implemented in existing strategies that are currently used to improve children's advertising literacy, namely advertising literacy training sessions, parental mediation strategies, and advertising disclosures. The proposed research directions are based on a thorough review of the existing literature. In the (online) appendix, an overview can be found of this past research which is linked to the different parts of the future research directions section. In addition, an overview is given of the various future research directions related to the proposed model (table 1), to automatic processes (table 2) and to tactics to improve advertising literacy (table 3), as initiated by various research questions.

INSERT TABLES 1-2-3 ABOUT HERE

Future Research Suggestions Related to the Proposed Model

Testing the Different Paths in the Proposed Model

The Impact of Strength of the Affect Transfer Mechanism. For now, it remains unclear how and to what extent advertising literacy can correct the affect transfer mechanism, of which the outcome can be either positive or negative. When children like the ad very much, the positive feelings evoked by the ad may be transferred to the brand. In contrast, when children are irritated by the ad and dislike it, the negative feeling that is aroused by this ad may be transferred to the brand. Previous research suggests that knowledge of persuasion can negatively correct this affect transfer mechanism by triggering reactance, as individuals do not like the feeling being persuaded as it threatens their freedom. However, a fair and nicely executed advertisement can also result in a positive judgment. Both the valence and the strength of the affect transfer and the judgment (the outcome of the critical reflection process) will determine whether the outcome is positive or negative. Additionally, the general attitude children hold toward advertising should be examined in this respect since it might strengthen or attenuate this process.

Understanding Children's Situational Advertising Literacy. When empirically investigating the role of children's advertising literacy in coping with embedded advertising, future research should first determine how the critical reflection is formed. That is, coping can range from very simple strategies as advertising avoidance to complex and sophisticated strategies involving critical thinking. Accordingly, it is crucial to investigate whether and from what age children are able to form well-substantiated evaluations of advertising, and for which children and in which circumstances (e.g., depending on the demanding nature of the advertising format) simple strategies (as advertising

avoidance) are more effective. According to Friestad and Wright (1994) people should first develop if-then rules related to tactic recognition to identify generic ad tactics (e.g. ‘if a product appears in a movie, then it may be brand placement’), then related to effectiveness (e.g. ‘if the movie is funny, this feeling may easily transfer to the placed brand’), and then related to appropriateness (e.g. ‘if the movie makers do not disclose the presence of brand placement, then it is deceptive’). Naturally, it should first be investigated which rules (and their content) are most effective, depending on the developmental stages of children.

The Role of the Different Dimensions of Dispositional Advertising Literacy. Currently, there is no research on how the different types of information nodes (cognitive, affective and moral) interact in forming the critical reflection situationally, and no insights available into which information nodes can directly affect the advertising effects. For instance, both cognitive and affective advertising literacy may be necessary to understand how advertising can affect people. That is, the former helps children understand the intent of advertising, while the latter helps them to be aware of and to regulate the potential affective reactions they might have, e.g. by consciously determining the extent to which they go along with the emotional appeals in the non-commercial content containing brand placement. However, it may be moral advertising literacy (i.e. for evaluating the appropriateness of e.g. the brand placement tactic in a specific situation or condition (for instance disclosed versus not, directed to adults versus children)) that ultimately determines whether this cognitive and affective advertising literacy positively or negatively affects the advertising effects (e.g. adjusting the attitude toward the placed brand, buying the advertised product, etc.). For instance, studies could hypothesize that recognizing and understanding an advergame will diminish advertising effects *if* children judge it as unfair to subconsciously persuade children by transferring positive affect from the game to the brand; and conversely (and importantly), that this cognitive advertising literacy will enhance advertising effects if people like the advertisement and/or judge the used tactic as appropriate.

Measurement Issues Related to the Proposed Model

In line with Waiguny et al. (2014), the current paper made a clear distinction between children's dispositional and situational advertising literacy. A review of the empirical literature on advertising literacy, however, reveals that this concept is measured on both dispositional and situational levels, mostly without giving any reason for the level of choice, and without describing possible implications.

Most studies only measure situational advertising literacy, e.g. by assessing children's recognition and understanding of the commercial source and/or intent of a specific advertisement (see e.g., An and Stern 2011; Rozendaal, Buijzen, and Valkenburg 2010; Rozendaal et al. 2013; van Reijmersdal, Rozendaal and Buijzen 2012; Verhellen et al. 2014). Only few studies focus on dispositional advertising literacy, e.g. by asking children "Do you think companies actually use [tactic name] to get you to notice, learn about, or buy their products?" (Freeman and Shapiro 2014) or asking them very generally "What is a television commercial?", "Why are commercials shown on television?" and "What do commercials try to do?" (Faber, Perloff and Hawkins 1982). Buijzen (2007), for instance, exposed children to a compilation of six toy commercials, afterwards measuring general items such as selling intent ("Do you think commercials try to sell things to people?") and persuasive intent ("Do you think commercials use special tricks to make the toys look better than they really are?"). Similarly, Carter et al. (2011) measured children's advertising literacy (after making them watch a television advertisement) simply by asking them open-ended question "What are ads on TV for?". In these studies, it is not clear to what extent children have applied the measured advertising literacy to the actual persuasive situation.

More conceptual and methodological confusion is at issue when we notice that many studies use situational and dispositional measurements interchangeably, often within one general scale for advertising literacy. In their Advertising Literacy Scale for Children, for instance, Rozendaal, Oprea and Buijzen (2016) measure both situational advertising literacy (recognition of advertising, its source and one's perception of the intended audience, after being exposed to a specific advertisement) as well as dispositional advertising literacy (such as understanding the selling intent, persuasive intent and

tactics of advertising in general). Similarly, Grohs, Wagner and Steiner (2012) exposed children to several expressions of sponsorship, afterwards measuring brand recognition in these examples (situational), followed by general dispositional measurements of selling intent (“Companies show their logos on facilities to make visitors purchase their products“) and persuasive intent (“Companies pay to show their logos on facilities”).

In sum, this overview leads us to the conclusion that situational and dispositional advertising literacy are two concepts which have often been entwined and used interchangeably in the past, leading to substantively different advertising literacy measurements, and thus potentially different results. Therefore, we need thorough, methodological research that brings the existing scales together and analyzes them, in order to develop and test adequate scales that measure (and distinguish between) dispositional and situational advertising. Hereby, sufficient attention should be given to measure the different dimensions of the dispositional advertising literacy construct.

Moderating Variables of the Proposed Model

The Moderating Impact of Children’s Development. Future research could investigate whether and how the proposed conceptual model applies to children in different age categories. It can be expected that among the children in the perceptual stage, affective and moral advertising literacy is underdeveloped or not applied. This implies that the recognition of advertising may actually enhance advertising effects, as it stimulates attention to the advertised brands or products, and does not involve corrective affective or moral evaluations. Among the children in the analytical phase, affective advertising literacy is probably better developed, yet moral advertising literacy may still be premature. This could imply that these children are more likely to show reactance: their suppressed emotional reactions may give room to feelings of disliking to be persuaded (as it threatens their freedom), consequently diminishing ad effects. Or, perhaps more likely in the context of the fun and immersive advertising formats directed at children, they will consciously choose to go with the flow of e.g. the advergame, allowing for positive affect transfer to happen. As concerns the children in the reflective

stage, their adult-like cognitive capacities may allow for the functioning of the “full model” including moral and affective advertising literacy. However, as research on children’s moral advertising literacy is non-existent, future studies should first delve deeper into how these children judge embedded advertising, and what are the reasoning strategies that underlie these judgments. More specifically, it is important to find out whether children are aware of these tactics, know how they function and what psychological states they attempt to bring about (e.g. positive affect transfer). This knowledge is essential to arrive at well-substantiated moral evaluations of advertising, which consumers need to form ‘valid’ attitudes about brands or products (Friestad and Wright 1994).

The Moderating Impact of Different Embedded Ad Formats. Future research should investigate whether the application of advertising literacy may depend on how cognitively and emotionally depleting the advertising format is. This can affect the ease with which children can recognize the formats, and the cognitive resources that they have left to process these advertisements and critically reflect on it. In addition, the impact of the different dimensions in the critical process can depend upon the advertising format that one is exposed to. As such, for an advergame the appropriateness dimension can be more important in the final judgment than for a website banner.

The Moderating Impact of Product Category /Brand Likeability. Another defining aspect that should be incorporated in further studies, is children’s (pre-existing) attitude toward the advertised brand and/or product category in general. Although this cannot be considered as an advertising literacy dimension, a negative attitude in this regard may cause (even moral advertising literate) children to directly dismiss an advertisement when recognized as such. In this context, it could be worthwhile to more carefully consider the products or brands children are exposed to in studies. It is conceivable that in case of advertising for a brand or product (category) that is highly salient for children (e.g. toys), cognitive advertising literacy may strengthen susceptibility to persuasion by activating schemas of liking, desiring and possessing (Van Reijmersdal, Rozendaal and Buijzen 2015). Conversely, in case

of a lowly salient brand or product (category), children may be more inclined to apply their advertising literacies.

Future Research Suggestions Related to Automatic Processing of Advertising

The current paper suggests the use of strategies that can stimulate children's coping skills via cognitively less demanding, automatic processes. Specifically, we argue that combining *persuasive intent priming* (Fransen and Fennis 2014) with *implementation intentions* (Gollwitzer 1999) may be the most beneficial strategy to increase children's coping with embedded advertising. It is expected that persuasive intent priming can help children to automatically activate their associative network related to advertising, resulting in an increased ability to recognize the persuasive intent of a message. Additionally, it is expected that implementation intentions can subsequently help children to *critically reflect* on advertising messages by relying on simple and low demanding if-then heuristics. Further research should examine the potential of these strategies to increase children's critical reflections towards embedded advertising more in depth.

Persuasive Intent Priming to Activate Children's Coping State. The persuasive intent priming strategy, as proposed by Fransen and Fennis (2014), consists of automatically and non-consciously activating the concept of persuasive intent. The priming strategy operates through the simple act of reminding people of a situation in which someone tried to influence their behavior (without explicitly referencing to the advertising it precedes). This activates the associative network regarding persuasion which may affect subsequent coping with persuasive attempts. Using an experimental design, Fransen and Fennis (2014) demonstrated that this implicit priming strategy is not only equally effective as a traditional, explicit forewarning strategy in reducing the influence of heuristic cues used by advertisers (e.g. assuming that when a celebrity uses a product, it must be good), but that it also requires less cognitive resources. More specifically, individuals who were asked to recall and write down a situation in which they were subject to a persuasion attempt, prior to being exposed to advertising (for

facial cream, relying on scientific authority, and for toothpaste, asserting dentist recommendation), judged the advertising to be less convincing, reliable and effective (while using less cognitive resources compared to the traditional forewarning strategy). These results make this priming strategy sound auspicious in the light of activating children's advertising coping mechanisms.

It has to be noted, however, that Fransen and Fennis executed the priming immediately before advertising exposure. Therefore, it is not known if priming wears out after a specific amount of time. It seems unlikely, though, that a single priming session will affect the processing of each subsequent advertising exposure. As it is undesirable and unrealistic to prime individuals by having them recall and write down an experienced persuasive attempt before each advertisement they are confronted with, we suggest to use an advertising disclosure which triggers the persuasive intent priming, as can be learned in school. Usually, an advertising disclosure helps the individual to recognize the commercial content as it indicates that this content is 'advertising' or 'sponsored content' or 'product placement'. This is different from a persuasive intent priming as this refers to the act of reminding an individual of a past persuasive attempt, thereby triggering the information nodes related to persuasion and helping them to cope with subsequent persuasive attempts. The current paper, however, suggests to combine both in that an advertising disclosure also triggers the right information nodes necessary to critically evaluate the persuasion attempt (how should I evaluate this commercial message, what questions should I ask myself? E.g., is the tactic used in this ad fair?). In school, children will need to learn to connect the disclosure to the recall of persuasive attempts they experienced in the past. In an educational package, for instance, exercises can be included in which children learn to recall and write down situations in which they were persuaded. The precondition is that the recognition cue is linked to these exercises so that the coupling will become automatic. By doing so, this association will later be activated when children only see the advertising recognition cue, hereby reducing the required cognitive load. We expect this strategy to be primarily effective for children in the analytical stage (age of 7 and older, i.e. 'cued processors'; John 1999), as from this stage onwards children are able to activate stored knowledge from memory and use it to process advertising when triggered by a cue or prompt. Given that the advertising recognition cue activates the related information nodes in the

associative network, the commercial message will be recognized with greater ease. However, this preparation state is insufficient to stimulate critical thoughts. Therefore, implementation intentions might offer a solution.

Implementation Intentions as Automatic, Simple If-Then Heuristics. While we acknowledge that experience and practice are crucial in developing advertising literacy, we believe that, in the present-day context of rapidly evolving advertising formats, it is necessary to implement interventions to assist children more actively and to accelerate this learning process. Therefore, it is imperative to dig deeper in the literature on *'implementation intentions'* (Gollwitzer 1999) as it elaborates on the 'if-then' heuristics as advanced by Friestad and Wright (1994) in the context of marketplace persuasion. Using implementation intentions has proven to be utterly effective in goal attainment, by predetermining specific goal-directed responses to anticipated cues or critical events that may occur in the future (i.e. opportunities for goal attainment), often expressed by *'If situation X occurs, then I will respond in this way (that is conducive to reach my goal)'* (Gollwitzer 1999). Although research on the effect of implementation intentions on children's advertising coping skills is still scarce, the first results are promising. A preliminary study by Rozendaal and Anschütz (2015) showed that forming implementation intentions related to using advertising avoidance strategies decreased eight- to twelve-year-old children's advertising susceptibility. More specifically, children who had formed an implementation intention (e.g., "If I see an ad, then I ignore that ad") prior to viewing a television commercial were less likely to choose the advertised product than those who did not form the intention. Additionally, Mau and colleagues (2015) investigated the impact of implementation intentions on the delay of gratification in children. They found that forming an implementation intention supported seven-year-old children in goal attainment and shielded the attention from distracting cues, such as attractive marketing stimuli.

Implementation intentions seem particularly relevant for the goal of coping with embedded advertising. In particular, a great deal of the embedded formats count on persuasion through automatic processes that bypass critical thinking, by heavily relying on cognitive depletion through immersive

advertising tactics. Implementation intentions are expected to use a similar path, in that they should establish an automatic connection between cues/future situations and specific goal-directed behaviors, which may in turn automatically lead to the ultimate goal of successfully coping with advertising, while using few cognitive resources (Gollwitzer 1999).

More specifically, it is assumed that forming a concrete plan about how to act in a future situation leads to a mental representation of that situation, thereby activating the associative network that guides and improves perception, attention and memory when the anticipated situation actually arises. The heightened salience of the ‘if’ should then result in an automatic and effective implementation of the ‘then’, in an undeliberated, subconscious and effortless manner. Moreover, this automation implies that possible distractions that could impede goal attainment are efficiently avoided (Gollwitzer 1999). This is particularly relevant in the context of advertising, as the bulk of embedded advertising formats is characterized by distracting tactics (to circumvent critical advertising processing). In line with the implementation intention literature, the proposed ‘if-then’ reasoning implies that when children are confronted with a commercial message, they will automatically intend to behave in a critical manner by using different heuristics.

Applying implementation intentions can be expected to augment situational advertising literacy in the first place. In particular, when these heuristics are adequately learned they may easily be retrieved to activate advertising-related knowledge, even when individuals have a limited motivation or capability to allocate cognitive resources to the processing of the advertising message. This is because these heuristics are based on the noticing of a limited amount of features of a persuasion attempt (e.g., if you see an advertising cue, you are confronted with advertising).

Given the changes in the current advertising context, researchers should acknowledge the increasing relevance of using the “appropriateness heuristic”, which should make children think about the fairness of the advertising message they are exposed to (e.g., ‘if I notice a brand/commercial message, I wonder whether the used strategy is appropriate’, or more specific ‘if an actor in a movie uses products with their brand directed toward the camera without the mentioning of product placement, then an advertiser wants to influence me in an inappropriate way’). The appropriateness of

a certain advertising message can be evaluated on different dimensions, such as related to the use of a certain format, or related to the use of concrete tactics.

It is not only important to extend children's associative network through educating them about specific persuasive tactics, and the heuristics that may be applied to them. It is also necessary for them to engage in repetitive experience and practice, for at least two reasons. First, it is only through these processes that dispositional advertising literacy can be translated into situational advertising literacy, and that the skill to perform this transformation can be improved (Bruning, Schraw and Norby 2010), leading to more complex and adaptive heuristics. Second, this application can be implemented more deeply and extensively after one is exposed to advertising. Of course, repetition, rehearsal and practice in applying the relevant (appropriateness) heuristics take time. Further research is necessary to investigate the most effective strategy and its implementation. In particular, we suggest that existing interventions such as advertising disclosures, training sessions and parental mediation strategies incorporate these strategies.

Future Research Suggestions on How to Improve Advertising Literacy

Advertising Disclosures

Children need help to recognize a persuasive attempt, for example by the use of a disclosure (John 1999). A disclosure can take various forms such as an advertising break on television or a disclaimer identifying the presence of commercial content on a website or in a game (An and Stern 2011). Whatever the form, the purpose of the disclosure is 1) to help children recognize the commercial content and 2) disclose its persuasive intent. Remarkably, though, is that in the last decade only four studies have investigated the effects of warning cues on children's advertising literacy (see Online Appendix, p.5).

Accordingly, the question arises how such a disclosure should be designed (e.g. visual/auditory, color, message) for triggering children's advertising literacy most effectively when

they are exposed to advertising. In the case of traditional advertising, Rozendaal, Buis and Van Reijmersdal (2016) found that a forewarning disclosing the manipulative intent of television commercials was effective in decreasing product desire among eight to ten year old children, while a forewarning disclosing the commercial intent was not. Future research should investigate if this is also the case for embedded advertising.

Furthermore, in the case of children, it is all the more important to make sure that children understand the meaning of the cue; otherwise it will not be effective in terms of stimulating advertising recognition and (certainly not) in terms of critical reflection (see Tessitore and Geuens 2013). Future research should investigate how e.g. conditioning can be used for children to give meaning to cues, depending on their developmental stage.

In addition, future research should look for the most effective cue in terms of timing (e.g. before, during or after ad exposure) and exposure time (how many seconds). In this respect, it would be interesting to examine the usefulness of debriefing children for improving their advertising literacy for embedded advertising formats, during an extended period of time after exposure. As embedded advertising formats are often immersive, which hinders or demotivates children (and adults) to stop their engagement with the media content and think about the commercial content (Rozendaal, Lapierre, et al. 2011) during exposure, it may be more fruitful to motivate children to reflect upon the commercial content after exposure, i.e. through debriefing. Although Boerman, Van Reijmersdal and Neijens (2014) found that a disclosure which was shown at the end of a program was not effective in decreasing ad effects, it may still be useful when considered as a debriefing tool (in combination with e.g. a disclosure used to prime persuasive intent, or one that is shown concurrently with the commercial content).

Literature on children's development suggest that a disclosure is especially crucial for children in the analytical phase; however, for embedded formats, disclosures may also be needed to stimulate and assist children in forming a critical reflection. Future research should therefore investigate the design and effectiveness of such disclosures for different embedded advertising formats.

Training Sessions

As schools are important outlets to reach millions of children, in-school educational programs (such as the European Media Smart program) form an ideal opportunity to teach children how to cope with advertising on a large scale. Surprisingly, little is known about the effectiveness of such advertising literacy programs (Nelson 2016). In the past, a limited body of research indicated that an educational intervention can make a difference by enhancing children's comprehension and knowledge of advertising (e.g. An, Jin and Park 2014; Hudders et al. 2015). Yet, these studies mainly focus on 1) advertising in traditional media and 2) improving children's cognitive advertising literacy. Future research should therefore also focus on how affective and moral advertising literacy can be improved for embedded advertising formats.

In addition, and as mentioned above, by using educational packages children should learn how to activate the correct associations related to persuasion when confronted with an advertising cue. This may be reached by collaborative learning or self-persuasion by which children imagine their personal experience with a persuasive attempt they encountered earlier on. By repeating and rehearsing this association over time, children will activate their critical mindset when confronted with the disclosure. As a second step children need to be actively taught to critically process any persuasive attempt by applying the appropriateness or other related heuristics. Future research should therefore focus on how 'if-then' heuristics can be integrated in advertising literacy education, and how effective this strategy really is in automating advertising-related coping processes, at the moment children are exposed to advertising.

Parental Mediation Strategies

Parents can play a crucial role in the development of children's advertising literacy as a great part of children's media use takes part at home (Buijzen 2007) (though, in the last decade, only two studies have investigated this; see Online Appendix p.5). In particular, parents do not only have the ability to restrict children's media use, but they can also function as a role model for their children in teaching them how to react in consumption situations (Shin, Huh and Faber 2012). Traditionally, the

literature distinguishes between three forms of parental mediation: restrictive mediation (referring to establishing parental rules about media use time and specific media content), instructive or active mediation (which is about parent-child communication about media use, such as discussing the content of TV programs and its commercial messages) and co-viewing (i.e. the mediating act of parents watching TV with their children) (Warren 2005). Earlier research demonstrated the advantages of co-viewing in terms of advertising effects (e.g. making positive comments during food commercials reduces children's preference for sugary snacks) (Galst 1980), yet similar studies on advertising literacy are surprisingly scarce, and mainly focus on traditional media formats (i.e. TV). There is a pressing need for research on how parental mediation can impact children's advertising literacy, and its cognitive, affective and moral dimensions, on both situational and dispositional levels.

In the context of the embedded advertising formats, we believe that (active) co-viewing (or rather, co-using) in combination with the persuasive intent priming and the implementation intentions strategy is most promising. More specifically, parents could complement in-school advertising literacy training sessions, by providing the time (that schools are lacking) for practicing, i.e. by helping their children to apply the appropriate if-then heuristics when being confronted with advertising at home. Precondition for this is that parents are advertising literate themselves, and previous research shows that this is not always the case (Evans, Carlson and Hoy 2013). Therefore, one should invest in awareness tools and educational packages which can be used by both parents and their children (ideally in combination, e.g. a competitive game that parents can play with their children) to improve their advertising literacy level. Future research could investigate how and when (e.g. before, during or after advertising exposure) parents can assist their children in evoking the most adaptive heuristic. In addition, future research should investigate which strategies are effective depending on the developmental stage the children are in and the format they are exposed to.

CONCLUSION

The current paper sheds a light on the issues that may arise when children are confronted with embedded advertising. It emphasizes the need to learn them automatic and more implicit mechanisms

to activate and apply their advertising literacy. This will enable them to cope with advertising in a conscious and critical way. This not necessarily leads to negative advertising effects as the outcome of the process can be positive when an advertisement is nicely executed and uses fair and appropriate tactics. It is essential to conduct further research to unravel the working of advertising literacy among children, identify age-related differences, and issues related to format-specific characteristics. The paper further encourages a broad and integrated approach when improving children's advertising literacy, including the stimulation of fair and ethical advertising practices, implement advertising disclosures that improve recognition of commercial content and help children to activate the right if-then rules, develop in-school training sessions to extend children's dispositional advertising literacy and improve coping skills and raise awareness among parents about their role in helping children to cope with advertising. These advices will empower children to cope with embedded advertising.

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