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Personalized and cued advertising aimed at children

Reference:
Daems Kristien, De Keyzer Freya, De Pelsmacker Patrick, Moons Ingrid.- Personalized and cued advertising aimed at children
Young Consumers / World Advertising Research Centre - ISSN 1747-3616 - 20:2(2019)
Full text (Publisher's DOI): https://doi.org/10.1108/YC-10-2018-0864
Personalized and Cued Advertising aimed at Children

Structured abstract

**Purpose.** The study explores the effect of personalization of advertising and adding an advertising cue to advertisements on Facebook, on 9-13 year old children’s awareness of selling intent, attitude towards the advertisement (Aad) and word-of-mouth (WOM) intention.

**Design/methodology/approach.** A 2 (personalized ad vs. non-personalized ad) x 2 (advertising cue vs. no advertising cue) between-subjects design was tested among 167 Belgian children aged 9-13 by means of an in-class online experiment.

**Findings.** Personalization combined with an advertising cue increases the awareness of selling intent, but influences neither Aad, nor WOM-intention. Awareness of selling intent does not affect WOM intention. Personalization does not increase Aad. Aad has a positive effect on WOM intention.

**Implications.** Implementing a clear advertising cue enhances children’s awareness of selling intent of personalized advertising, but does not affect behavioral intention. Public policy, the advertising community, and the educational system should take these insights into account when developing regulations, ethical advertisements and educational packages to improve children’s understanding and responses to contemporary advertising formats.

**Originality/value.** The study is the first one to investigate the joint effect of advertising personalization and an advertising cue on awareness of selling intent and on evaluative and behavioral responses of children. Additionally, the role of Aad and awareness of selling intent for the development of WOM intention is explored.

**Keywords:** advertising personalization, advertising cue, awareness of selling intent, attitude towards the advertisement, word-of-mouth intention, children

**Article classification:** research paper
Introduction

Advertising aimed at children has been a subject of debate among advertising practitioners, scholars, parents and policy makers for decades. Lately, the focus of this debate has shifted from traditional advertising to online advertising formats, especially on social networking sites (SNSs) (e.g. Daems et al., 2017a, Hudders et al., 2017). Social networking sites are ‘Applications that enable users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other’ (Kaplan and Haenlein, 2010 p. 63). In December 2018, Facebook was the most often used social networking site worldwide with 2.321 billion monthly active users (Facebook Inc., 2018). SNSs are also very popular among children and teenagers (Ofcom, 2017). Although Facebook’s terms and conditions state that the use of a Facebook account is prohibited under the age of 13 (Facebook, 2018), six out of ten children between 9 and 12 are active on Facebook (Livingstone et al., 2014). In the United Kingdom, for example, 23% of the children between 8 and 11 and 74% of teenagers between 12 and 15 have a Facebook profile (Ofcom, 2017). In Flanders (Belgium), the context of the current study, 27% of the children between 10 and 12 years old and 65% of the children in the first two years of secondary school (12-14 years old) are active on Facebook (Apestaartjaren, 2018).

SNSs are advertising-funded. Facebook reports t 55 million dollars in advertising revenue in 2018 (Facebook Inc., 2019). Advertisers on SNSs adapt their messages to consumers’ interests, preferences and characteristics which are provided via users’ personal profiles (De Pauw et al., 2018a). This technique is called personalization of advertising, defined as ‘advertising that is tailored to an individual’s characteristics and/or interests’ (De Keyzer et al., 2015 p. 125). The
effect of advertising personalization on children and teenagers has received scant attention in academic literature (e.g. van Reijmersdal et al., 2016, Zarouali et al., 2018). The first objective of the current study is to investigate the responses of 9-13 year old children to personalized advertising on a SNS.

Contemporary advertising formats often embed a commercial message into an entertaining and/or social context (Vyvey et al., 2018). For instance, advertising on SNSs is integrated in other content created by someone’s connections on the SNS. Moreover, advertising that appears in the feed of e.g. Facebook or Instagram as ‘sponsored content’ looks like posts of other connections within someone’s social network (called ‘native’ advertising) (Boerman et al., 2017, Wojdynski and Evans, 2016). The subtle nature of this advertising format has been criticized because it is hard to recognize the embedded message as advertising, even more so for children and teenagers than for adults, because of the less developed cognitive skills of the former (Panic et al., 2013).

Especially children lack advertising experience and cognitive skills to recognize advertising embedded in other media content and to understand its commercial and persuasive intent (De Jans et al., 2018, Moses and Baldwin, 2005, Rozendaal et al., 2010,). Hence, in order to help them identify advertising and distinguish it from mediated content, advertising cues can be used. Cues are messages that function as a break between the editorial content and the advertising message and that allow viewers to recognize a message as ‘advertising’ (An and Stern, 2011, Wright et al., 2005). Our second objective is to explore the role of an advertising cue on the responses of 9-13 year old children to personalized advertising on a SNS.

Apart from focusing on evaluative responses such as the attitude towards the advertisement (Aad), in the current study, we also focus on awareness of selling intent and WOM intention as outcome variables of personalized and cued advertising. Awareness of selling intent (i.e. ‘the advertiser
tries to sell the product to me’) is crucial in the context of personalized advertising aimed at young consumers because of their limited advertising literacy (Rozendaal et al., 2010). In the context of advertising on SNSs, consumer activation and engagement measures are very relevant to assess the effectiveness of advertising or responses to messages. Consumer engagement is ‘a consumer’s positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer-brand interactions’ (Hollebeek et al., 2014 p. 154). We also use word-of-mouth (WOM) (intention), information consumers provide or intend to provide to interpersonal relations such as friends and family as an outcome variable. WOM is an indicator that is increasingly used to capture online consumer engagement, in studies with both adults (e.g. De Keyzer et al., 2017, De Pelsmacker et al., 2018), and children (e.g. Bao et al., 2019).

The current study offers several contributions. First, we examine the role of personalization, an important characteristic of advertising in contemporary advertising formats on a social networking site that has only received scant attention in academic literature (Boerman et al., 2017). Second, we investigate the process by means of which personalization and cueing has an effect on WOM-intention, by exploring the mediating role of awareness of selling intent and the attitude towards the advertisement in this process.

Third, our study is conducted in a group of Belgian children aged 9-13, a crucial age group that has seldom been studied in advertising research. Children of that age are confronted with online embedded advertising regularly (e.g. playing games, visiting websites, using social media, etc.) as they spend lots of time online (Ofcom, 2017). Roedder (1981) classifies children into three groups based on their skills to process information. Children younger than 8 are ‘limited processors’.
group has not fully obtained information processing skills. *Cued processors*, children between 8 and 12 years old, possess information processing skills, but they should be prompted in order to retrieve this stored information. Teenagers from the age of 13 years onwards are ‘*strategic processors*’. This group does not need a cue to retrieve stored information. When children are in the *analytical* stage of their cognitive development (age 8-11), they are able to understand that the goal of advertising is to sell products. From the *reflective* stage onwards (12 years and older), they develop a more in-depth and thorough advertising knowledge which makes them able to comprehend more subtle advertising intentions (e.g. this commercial message wants to influence my belief and attitudes about the brand to establish brand preference). It is generally assumed that, from the age of 12 years onwards, children obtain the same level of advertising knowledge and consumer experience as adults (John, 1999). However, research indicates that even at age 12 children have not fully acquired an adult-like understanding of the persuasive intent, especially of contemporary advertising formats (Rozendaal et al., 2010). The 11-13 age group is thus an important one in that it is in between the crucial transition stage from cued analytical processors to strategic perceptual processors.

The current study also contributes to the ongoing debate about the effects of advertising targeted at children in the context of SNSs, and provides insights for advertisers, educators and public policy about the effects of native advertising practices, advertising personalization and disclosures aimed at minors, and how to cope with them.

**Literature Review and Hypotheses**
Personalization of Advertising

Social networking sites increasingly collect information from (young) consumers and this information is used intensively for personalized advertising (van Reijmersdal et al., 2016). Personalized advertising is expected to trigger awareness of selling intent because it draws the attention to the tailor-made nature of the advertisement (Baek and Morimoto, 2012). Personalization of advertising can lead to positive responses because it is perceived as more relevant for the consumers’ personal situation (De Keyzer et al., 2015, Walrave et al., 2016). This is also the case for children (van Reijmersdal et al., 2016). We expect:

H1. (a) Awareness of selling intent is higher, (b) the attitude towards the ad is more positive and (c) word-of-mouth intention is higher for personalized ads than for non-personalized ads.

The Moderating Effect of an Advertising Cue

To fully understand advertising, an individual has to be able to identify advertising and to distinguish it from editorial or entertaining contexts, and to understand the commercial and persuasive intentions and techniques of the advertising format (Moses and Baldwin, 2005, Rozendaal et al., 2010, Vanwesenbeeck et al., 2016). This is not easy for children, especially in the case of integrated online advertising (Moses and Baldwin, 2005, Rozendaal et al., 2010). Importantly, even if children possess persuasion knowledge, they will not necessarily use this knowledge automatically (Panic et al., 2013, van Reijmersdal et al., 2012). Children aged 9-13 are cued processors, i.e. they will retrieve this knowledge if they are encouraged to do so by means
of a cue or a clear indication (Roedder, 1981, van Reijmersdal et al., 2012). An advertising cue
(disclosure) will thus help them differentiate advertising from other content by activating
persuasion knowledge (, De Jans et al., 2018).

When such a cue is present, we expect that it will qualify the main effect of personalization, in that
it will have more effect in case of a personalized ad then in case of a non-personalized one. Due
to the presence of an advertising cue, the child is made aware of the fact that a message is an
advertisement, and it may notice more easily that the advertisement is based on its personal
preferences and interests. Consequently, the personalization of the ad as a persuasive tactic will
become more salient as a result of the cue. A cue may also raise the awareness of selling intent of
non-personalized ads, but less so because the element of personalization is lacking as an extra
trigger for recognizing persuasive intent.

Similarly, although personalization may generally lead to more positive evaluative and behavioral
responses, as argued in H1b-c, this may be less the case when an advertising cue accompanies a
personalized ad than a non-personalized one. When children are made aware of the persuasive
nature of an ad, the fact that it is personalized may trigger more negative brand responses than
when the ad is not personalized, because in the former case it may be regarded as a less appropriate
tactic (Boerman et al., 2017, Wojdynski et al., 2017, Wojdynski and Evans, 2016). The lack of a
cue inhibits interpreting and processing the message as advertising. Therefore, if no cue is present,
we do not expect differences in responses to a non-personalized and a personalized one. We expect:
H2: In the presence of an advertising cue, (a) awareness of selling intent is higher, (b) the attitude towards the ad is lower, and (c) word-of-mouth intention is lower for personalized ads than for non-personalized ads.

The Mediating role of Awareness of Selling Intent and the Attitude Towards the Advertisement

In H2 we argued that, in the presence of a cue, personalized advertising leads to less WOM-intention than non-personalized advertising. We posit that this effect will be mediated by both a cognitive (awareness of selling intent) and an affective (attitude towards the advertisement) response. First of all, as argued before, we expect that personalization accompanied by an advertising cue will lead to more awareness of selling intent than a non-personalized ad accompanied by a cue because, as a result of the cue, the viewer will notice that the personalized ad is based on his or her personal preferences and interests. If an individual’s awareness of selling intent is activated, he or she will try to cope with the advertiser’s intentions (Friestad and Wright, 1994, Wright et al., 2005). This may negatively affect WOM-intention (Boerman et al., 2012, Boerman et al., 2014). We expect:

H3. The effect of personalization on WOM-intention is mediated by the awareness of selling intent and moderated by the presence of an advertising cue such that, (a) compared to a non-personalized ad accompanied by a cue, personalization combined with a cue leads to more awareness of selling intent, and (b) awareness of selling intent has a negative effect on WOM-intention.
Personalization is expected to lead to a positive effect on the attitude towards the ad (Aad), because it can increase its perceived personal relevance (De Keyzer et al., 2015, Walrave et al., 2016). Prior studies show that consumers’ ad and brand evaluations are lowered upon noticing controversial marketing tactics used by brands (e.g. Milne et al., 2009, Wei et al., 2008). Therefore, we expect that the presence of an advertising cue may attenuate the positive effect of personalization on the attitude towards the ad, because being made aware of the commercial nature of the message may lower ad liking. A more positive Aad is expected to lead to higher WOM-intention, similar to the well-established positive effect of Aad on brand attitude and behavioral intentions (Homer, 1990). We expect:

H4. The effect of personalization on WOM-intention is mediated by the attitude towards the ad and moderated by the presence of an advertising cue such that (a) compared to a non-personalized ad accompanied by a cue, personalization combined with a cue leads to a less positive attitude towards the ad, and (b) the attitude towards the ad has a positive effect on WOM-intention.

The conceptual model of this moderated mediation process is shown in Figure 1.

<<Figure 1 here>>

Figure 1. Moderated mediation model
Advertising cue

H3a: +

Awareness of selling intent

H3b: -

WOM intention

H4a: -

Attitude towards the ad

H4b: +

Personalization
Method

Design and Stimuli

A 2 (personalization vs. non-personalization) X 2 (advertising cue vs. no cue) between-subjects online experiment was conducted. 9-13 year old children were exposed to a mocked Facebook page containing a native ad for a fictitious amusement park (‘Coasterland’) in the News Feed. A fictitious brand was used to exclude potential confounds from existing brand attitudes and brand familiarity. An amusement park was chosen since, based on exploratory interviews with seven 9-13 year old’s, it appeared to be equally appealing to both boys and girls. To enhance the reality of the experiment, other features on the Facebook News Feed page were added, such as a message indicating a profile picture update and additional information in the left corner of the fictitious News Feed. The Facebook page contained a gender neutral name (‘Sam’) and the profile picture was an image of a waterfall.

Personalization was manipulated based on participants’ chosen favorite television personality. During the same exploratory interviews with seven 9-13 year old’s, six popular and likeable television personalities were selected. In the personalized conditions, the participants were exposed to a native advertisement showing their chosen favorite television personality on the amusement park picture (personalized celebrity endorsement). In the non-personalized conditions, no picture of a television personality was shown on the amusement park picture.

The presence of an advertising cue was manipulated by either adding or not adding a cue, placed in the left corner above the advertisement. For such a cue to be effective, it must be noticed and it must be clear what it stands for (Wojdynski et al., 2017, Wojdynski and Evans, 2016). The current study uses a cue that is clear, visually prominent, uses explicit language and indicates clearly that
the message is advertising (De Jans et al., 2018, Evans et al., 2017, Federal Trade Commission, 2013, Wojdynski et al., 2017). It consists of a human shaped icon figure holding a white panel with red borders containing the message ‘reclame’ (the Dutch word for ‘advertising’) in large black letters. This cue is much clearer than what is typically shown on Facebook (i.e. ‘sponsored’ in light grey). The stimulus was 470 px by 574 px. Moreover, the cue was 100 px by 100 px and thus large and very visible.

Procedure and Sample

Data was collected from three primary schools and one secondary school in Flanders, Belgium. Approval of the schools and active parental consent was obtained by means of signing a consent form. The data was collected in a classroom setting. Each participant had a computer at his or her disposal. Participants had to fill in the online survey individually and could proceed through the questionnaire at their own pace. At the beginning of the survey, four questions with six pre-set response options were posed. Respondents had to indicate their favorite color (filler), favorite food (filler), favorite animal (filler) and favorite television personality. The latter was used to personalize the advertisement. The participants could indicate one television personality out of a list containing names and pictures of six (3 males and 3 females). This was followed by questions about their Facebook use, age and gender. Next, as filler time, children were instructed to watch a YouTube-video about fire breathers (duration: three minutes). After filling out these questions and watching the video, each of them was exposed to one of the stimuli. Then, the participants were instructed to imagine that the Facebook page they were going to see was their own and that they had to watch the Facebook page as they would normally do.
They were then exposed to an image of the fictitious Facebook News Feed containing the advertisement. The participants were randomly assigned to one of the four conditions (personalized ad and presence of a cue, \( n = 38 \); non-personalized ad and presence of a cue, \( n = 41 \); personalized ad and no cue, \( n = 47 \); non-personalized ad and no cue \( n = 41 \)). They had to watch the stimulus for at least 15 seconds before they could continue to the questions about WOM intention, the attitude towards the ad, awareness of selling intent and the attitude towards amusement parks in general. After the experiment they were debriefed.

A total of 167 children (\( N_{5\text{th \ grade}} = 92 \), \( N_{7\text{th \ grade}} = 75 \), \( M_{\text{age}} = 11.15 \) years, \( SD = 1.12 \), 50.9% boys) participated in the study.

Measures

WOM-intention was measured by means of one item ranging from No, absolutely not – to Definitely yes: ‘Would you tell your friends about this amusement park?’. Awareness of selling intent was measured with one item ranging from No, absolutely not – to Definitely yes: ‘Is this message about the amusement park Coasterland there to make you or your parents buy tickets for Coasterland?’. The attitude towards the ad (\( \text{Aad} \)) was measured by means of 6 items ranging from totally disagree – totally agree: ‘Do you think the advertisement for Coasterland is funny, beautiful, boring, fantastic, ugly, nice?’. This scale was specifically developed to measure Aad with children (Pecheux and Derbaix, 1999) (Cronbach’s \( \alpha = 0.81 \)). The scores on the items ‘boring’ and ‘ugly’ were reversed-coded and the scores on the six items were then averaged for further analysis. The attitude towards amusement parks in general was measured by means of one item ‘How much
do you like it to go to an amusement park?' from I do not like it at all – to I like it very much. All measures used a 5-point scale with both verbal and non-verbal (emoticons) anchors ranging from 1 (two sad faces) to 5 (two happy faces). Using emoticons combined with verbal labels is a commonly used research technique in research with children (Panic et al., 2013).

Results

To test hypotheses 1 and 2, three 2X2 ANCOVAs were performed. Personalization and cue and their interaction are the independent variables, attitude towards the advertisement, awareness of selling intent and WOM intention the dependents, with the attitude towards amusement parks in general and Facebook use as covariates. An overview of the means, standard deviations and cell sizes for the three dependent variables is provided in table 1.

<<Table 1 here>>

There is a significant main effect of personalization on awareness of selling intent ($F (1,161) = 7.00, p = 0.009$). Awareness of selling intent is higher for personalized ads (M = 3.57) than for non-personalized ads (M = 3.02), which supports H1a. A marginally significant interaction between personalization and cue is found for awareness of selling intent ($F (1,161) = 3.85, p = 0.052$). Simple effects analysis shows that in the presence of an advertising cue, awareness of selling intent is higher for personalized ads (M = 3.80) than for non-personalized ads (M = 2.84) ($p = 0.002$) (Figure 2). As expected, in the absence of a cue, there is no significant difference between personalized (M = 3.34) and non-personalized ads (M = 3.20) ($p = 0.620$). Hypothesis 2a is supported. None of the two covariates are significant.
Figure 2. Interaction effect between advertising personalization and an advertising cue on the awareness of selling intent

The ANCOVA model for the attitude towards the ad is not significant ($p = .140$). Hypotheses 1b and 2b are thus not supported. No main effect of personalization ($F (1,161) = 0.37, p = 0.541$) and no significant interaction between personalization and cue ($F (1,161 = 0.76, p = 0.385$) are found for WOM intention. Simple effect tests did not result in significant differences either. Hypotheses 1c and 2c are not supported. There is a positive significant effect of the covariate ‘attitude towards amusement parks’ on WOM-intention ($F (1,161) = 11.86, p = 0.001$).

1 More detailed results of this analysis can be obtained from the authors
To investigate the mediating role of awareness of selling intent and the attitude towards the ad in the effect of personalization on WOM-intention, and the moderating role of an advertising cue on this process (Figure 1), we used Hayes’ PROCESS macro 8 (Hayes, 2013). Again, the attitude towards amusement parks and Facebook use were introduced as covariates.

The effect of personalization on awareness of selling intent is significantly positive (b = .53, p = .013) and in the presence of an advertising cue, the positive effect of personalization on the awareness of selling intent is stronger than that of a non-personalized ad (b = .82, p = .054). H3a is supported. However, awareness of selling intent does not have a significant effect on WOM-intention (b = -.06, p = .421). H3b is not supported.

The effect of personalization on the attitude towards the ad is not significant (b = -.04, p = .754) and the presence of an advertising cue does not have a significant moderating effect on the relationship between personalization and the attitude towards the ad (b = -.19, p = .462). H4a is not supported. The effect of the attitude towards the ad on WOM-intention is significantly positive (b =.50, p <.001). H4b is supported. Neither the direct effect of personalization on WOM intention (b = .18, p = .347), nor its interaction with the presence of a cue (b = -.19, p = 627) is significant.

The covariate attitude towards amusement parks has a significantly positive effect on the attitude towards the ad (b = .29, p = .02)$^2$.

Table 2 shows which hypotheses are supported or rejected.

<<Table 2 about here>>

$^2$ More detailed results of this analysis can be obtained from the authors
Conclusion and Discussion

In the presence of an advertising cue, personalized advertising leads to more awareness of selling intent in 9-13 year old children than non-personalized advertising. Earlier findings have also shown that, if a person notices that an advertisement is personalized, this can raise awareness of selling intent (Baek and Morimoto, 2012, Friestad and Wright, 1994). In the current study, this only appears to be the case when a clear advertising cue is present. As expected, there is no difference in awareness of selling intent between personalized and non-personalized ads when an advertising cue is absent. 9-13 year old children thus need a clear cue to be made aware of the commercial intent of a personalized advertisement. Personalizing the advertisement did not affect their WOM-intention, and the presence of an advertising cue did not significantly influence this relation. An explanation could be that WOM intention is not triggered by personalization or by a cue, but depends more on social (dis)approval of others (Eisingerich et al., 2015).

We expected that personalization would lead to positive effects on the attitude towards the ad, by increasing perceived personal relevance (De Keyzer et al., 2015, Walrave et al., 2016) or simply by using a favorite endorser, and that this effect would be attenuated by the presence of an advertising cue. However, neither personalizing the advertisement nor the presence of a cue affected children’s attitude towards the ad. A possible explanation is that children’s attitude towards the ad is mainly triggered by the extent to which they like the amusement park advertised rather than by the presence of a favorite television personality or a disclosure revealing the fact that the message is an advertisement. van Noort et al. (2013) also did not find effects of an advertising cue on the attitude towards the ad. They claim that the icon was perceived by their
respondents as some kind of third-party seal, indicating that the advertisement was right for them. This requires further research.

Research, both with respect to traditional and contemporary advertising formats, has often found that children’s awareness of selling intent leads to more critical processing of the advertisement and to negative brand evaluations and behavioral responses (Boush et al., 1994, Hudders et al., 2017). This is not the case in the current study. Several previous studies found no effect of awareness of selling intent either (e.g. Hudders and Cauberghe, 2018), or even to positive brand effects (e.g. Vanwesenbeeck et al., 2016). Indeed, a consumer may interpret a commercial message as informative, useful, appropriate and believable, and awareness of selling intent may then well lead to positive brand effects such as WOM (Tarabashkina et al., 2018). 9-13 year old children often lack the cognitive abilities to formulate a judgement about a commercial message integrated in entertaining and often cognitively demanding brand placement in other media content, such as their Facebook News Feed. In that case, they may simply think that the brand is a normal part of a website, as is the intention of native advertising. The awareness of selling intent may then not lead to negative brand effects, as is the case in the current study. All in all, the children in the current study appear to be uncritical to the advertising format tested, in that knowing that the message has a commercial intent does not affect their WOM intention.

In the current study, advertising personalization does not have an influence on the intention to share a message with family or friends. This is due to a combination of effects. Personalization leads to more awareness of selling intent, which is reinforced by the presence of an advertising cue, but this increased awareness does not lead to less WOM-intention. Simultaneously, more ad liking leads to a higher WOM-intention. However, this effect is neither influenced by whether or
not the advertisement is personalized, nor by the presence of a cue. The most important conclusion of our study is that personalization combined with an advertising cue leads to increased advertising literacy (awareness of selling intent), but apparently, 9-13 year old children do not develop a deeper insight and a more critical attitude towards these ads that would affect their attitude towards the ad or the intention to talk about it with their friends and peers. Liking an advertisement does not depend on personalization or a cue, but does lead to higher WOM-intention.

Frameworks such as the Persuasion Knowledge Model (PKM) (Friestad and Wright, 1994) and consumer socialization of children (John, 1999) are based on research with a focus on traditional advertising formats. Based on the insights of the current study, these frameworks should be updated to the personalized nature of the current advertising landscape (Panic et al., 2013, Vanwesenbeeck et al., 2016). The traditional view that 12 year old children have an adult understanding of advertising and act upon it, should be challenged in that they still need a clear cue to trigger persuasion knowledge when exposed to personalized advertising formats (Verhellen et al., 2014) and need a deeper development of critical processing to cope with these persuasive techniques (Panic et al., 2013, Rozendaal et al., 2010).

Implications

The current study has implications for public policy, parents, educators, social marketers and the advertising industry. Our results show that becoming aware of the selling intent of a personalized advertisement is reinforced by using a clear advertising cue. Policy makers and the advertising industry could increase children’s empowerment by providing clear and unambiguous cues that facilitate the identification of commercial content and trigger advertising literacy. Activating this
knowledge could benefit their critical reflection when they are exposed to brand placements. The advertising industry should be actively engaged in the development and implementation of a proper advertising disclosure (De Jans et al., 2018, De Pauw et al., 2018a). Public policy should consider to enforce the implementation of such a consistent and clear disclosure, and parents, educators and social marketers should support and explain it to children.

In the current study, awareness of selling intent did not lead to negative brand effects. Consequently, the children in the current study appear to be uncritical to the advertising format tested, in that knowing that the message has a commercial intent does not affect their WOM intention. Liking an ad is the main trigger to talk about it with their friends and peers, regardless of the personalized nature of the ad and disclosure. Full protection of minors under the age of 13 is a utopia. However, children should be informed and educated about the techniques used to persuade them and about data collection and personalization strategies, in order to develop a critical attitude towards them. This is a joint responsibility of parents, educators, the advertising industry, social marketing and public policy.

In order to educate and inform children to become well-informed, critical and privacy-aware consumers, media- and advertising literacy education should be further encouraged (Zarouali et al., 2017). Hudders et al. (2016) showed that training sessions at school accelerated children’s persuasion knowledge and advertising literacy for advergames. Nelson (2016) found that a three-hour advertising literacy class increased children’s understanding of the message creator, the
selling intent, persuasive strategy, and target audience. Finally, also parents have a role to play, as a mediator of children’s exposure to online. In order to assume this role, they will often have to be made advertising literate themselves first. Research shows that even adults have difficulties in recognizing novel advertising formats (Boerman et al., 2017), and they may not always be aware of their effect on children. Hence, policy makers and social marketers should provide parents with more information about effective strategies to teach their children how to cope with the impact of contemporary advertising formats (Hudders and Cauberghe, 2018).

**Future Research**

Participants in this study were exposed to a static Facebook News feed. Using an interactive social networking site could improve the external validity of the experiment by measuring actual behavior such as click-through or eWOM. Future research could use field studies to investigate personalization of advertising on SNSs in the same manner as it is applied in real life to provide results that are externally more valid. However, in such real-life studies, one has to be aware of the rules and regulations regarding privacy and data protection, especially when minors are involved.

Facebook was chosen as the social networking site in this study, since it is popular amongst 9-13 year old children (Apestaartjaren, 2018, Ofcom, 2017) However, it is relevant to study the effects of advertising in other increasingly popular social media, such as Instagram, since these platforms also contain personalized sponsored content, with or without a disclosure and differ in disclosure language (Evans et al., 2017).
The advertised product in the current study was an amusement park. In our sample, the average score on the attitude toward amusement parks in general was 4.54 on a 5-point scale. This indicates that the vast majority of children in this age group like amusement parks very much. Future research should replicate our work in the context of product categories toward which participants have a more diverse attitude.

We operationalized personalization by having the participants select their favorite celebrity and, for each participant, use their favorite celebrity to endorse the advertising message. We expected that this procedure would largely rule out differences in perceptions of attractiveness or feelings of (para-social) relationships. Nevertheless, effects of perceptions of attractiveness, celebrity-product fit and other potentially relevant variables such as trustworthiness and credibility cannot be ruled out completely (Rajabi et al., 2017). Future research using personalized celebrity endorsement should take these potential confounds explicitly into account.

We justified our choice for focusing on 9-13 year old children because they are in a crucial stage of their cognitive development in terms of recognizing and understanding advertising. However, the responses of, for instance, 8-9 year old and 13-14 year old children may be substantially different. The current study did not allow to formally compare groups that were meaningfully different in age. This is an area for further research. Future research should also further unravel the mechanism of how advertising personalization leads to brand responses and behavior(al intention) by including, for instance, personal relevance and intrusiveness as additional factors that may influence the process.
References


Homer, P. M. (1990), "The mediating role of attitude toward the ad: Some additional evidence", *Journal of Marketing Research*, pp. 78-86.


Table 1: Awareness of selling, attitude towards the advertisement intent and WOM-intention per condition

<table>
<thead>
<tr>
<th>Personalization</th>
<th>Cue</th>
<th>Awareness</th>
<th>Aad</th>
<th>WOM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>No personalization</td>
<td>No cue</td>
<td>3.22</td>
<td>1.49</td>
<td>3.32</td>
</tr>
<tr>
<td></td>
<td>Cue</td>
<td>2.83</td>
<td>1.36</td>
<td>3.46</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.02</td>
<td>1.43</td>
<td>3.39</td>
</tr>
<tr>
<td>Personalization</td>
<td>No cue</td>
<td>3.34</td>
<td>1.37</td>
<td>3.60</td>
</tr>
<tr>
<td></td>
<td>Cue</td>
<td>3.79</td>
<td>1.09</td>
<td>3.34</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.54</td>
<td>1.27</td>
<td>3.48</td>
</tr>
<tr>
<td>Total</td>
<td>No cue</td>
<td>3.28</td>
<td>1.42</td>
<td>3.47</td>
</tr>
<tr>
<td></td>
<td>Cue</td>
<td>3.29</td>
<td>1.32</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.29</td>
<td>1.37</td>
<td>3.44</td>
</tr>
</tbody>
</table>
Table 2: Supported and rejected hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported/rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1.</td>
<td>Supported</td>
</tr>
<tr>
<td>(a) Awareness of selling intent is higher,</td>
<td>Rejected</td>
</tr>
<tr>
<td>(b) the attitude towards the ad is more positive and</td>
<td>Rejected</td>
</tr>
<tr>
<td>(c) word-of-mouth intention is higher for personalized ads than for non-personalized ads.</td>
<td></td>
</tr>
<tr>
<td>H2: In the presence of an advertising cue,</td>
<td>Supported</td>
</tr>
<tr>
<td>(a) awareness of selling intent is higher,</td>
<td>Rejected</td>
</tr>
<tr>
<td>(b) the attitude towards the ad is lower, and</td>
<td>Rejected</td>
</tr>
<tr>
<td>(c) word-of-mouth intention is lower for personalized ads than for non-personalized ads.</td>
<td></td>
</tr>
<tr>
<td>H3. The effect of personalization on WOM-intention is mediated by the awareness of selling intent and moderated by the presence of an advertising cue such that,</td>
<td>Supported</td>
</tr>
<tr>
<td>(a) compared to a non-personalized ad accompanied by a cue, personalization combined with a cue leads to more awareness of selling intent, and</td>
<td>Rejected</td>
</tr>
<tr>
<td>(b) awareness of selling intent has a negative effect on WOM-intention.</td>
<td></td>
</tr>
<tr>
<td>H4. The effect of personalization on WOM-intention is mediated by the attitude towards the ad and moderated by the presence of an advertising cue such that</td>
<td>Rejected</td>
</tr>
<tr>
<td>(a) compared to a non-personalized ad accompanied by a cue, personalization combined with a cue leads to a less positive attitude towards the ad, and</td>
<td>Supported</td>
</tr>
<tr>
<td>(b) the attitude towards the ad has a positive effect on WOM-intention.</td>
<td></td>
</tr>
</tbody>
</table>