At What Age and How Does Understanding of Product Placement Develop?

By Reinhard Grohs, Heribert Reisinger, Elisabeth Wolfsteiner and Johanna Haas

Marketers have adopted some subtle forms of marketing communication targeted at children, including product placement, sponsorship, event marketing and internet advertising. This study investigates how well children understand product placement, in relation to their ages and other potential drivers of understanding. Findings from two empirical studies suggest that children already have some knowledge of product placement at the age of 10 years (recognition of an external source, perception of a target audience, identification of its symbolic nature) but are largely unable to retrieve that knowledge. The ability to fully understand the intentions of product placement becomes consolidated around the age of 12 years. The education levels of the parents and the existence of siblings affect some dimensions of children’s understanding of product placement too.

1. Introduction

Children and young people are increasingly regarded as consumers, with money of their own to spend as well as strong influences on their families’ consumption habits (Ekstroem/Tufte 2007). Moreover, children represent future markets (McNeal 1998). In general, they account for approximately US$600 billion in direct and indirect spending each year (Mallalieu/Palan/Laczniak 2005). Consequently, marketers target children as a distinct consumer segment. In the United States for example, spending on marketing communication activities centred on children is estimated to be US$15 billion annually (Linn 2004). Considering that children view approximately 40,000 television advertisements each year (Calvert 2008), and their exposure to television advertising appears to be increasing, researchers tend to focus on children’s perceptions of televised advertising (Moses/Baldwin 2005). But recently, marketers also have started to use more subtle forms of marketing communication aimed at children, such as product placement, sponsorship and internet advertising (Ekstroem/Tufte 2007; Grohs/Wagner/Steiner 2012). In particular, product placement in television shows and movies targeted at children represents a widely used communication instrument today (Hudson/Hudson/Peloza 2008; Moore 2004).

Product placement refers to the marketing communication activity that incorporates a product, brand, or firm name or logo into an entertainment vehicle, such as a movie or a television program, for promotional purposes (d’Astous/Chartier 2000; Russell/Belch 2005). It thus purposefully seeks to integrate commercial content into
non-commercial content. Uses of product placement have exploded in recent years (Homer 2009); in 2005, companies paid more than US$700 million in fees, free products and promotional support for film product placements (Wiles/Danielova 2009). Furthermore, in the past 20 years, product placement has evolved from being fairly simple to highly sophisticated and often global in scope and purpose (Karrh/Toland Frith/Callison 2001). Unlike advertising, product placement seeks to enhance realism, aid in character development and provide a sense of familiarity for consumers (Williams et al. 2011), which makes it harder to detect product placement as a form of marketing communication, especially by children (Grohs/Wagner 2011).

Whereas research on advertising and children abounds (e.g., Moore 2004; Moses/Baldwin 2005; Oates et al. 2003; Robertson/Rossiter 1974), research on product placement and children is relatively scarce. Auty/Lewis (2004) explore product placement in relation to its effects on a child’s product choice, and Owen et al. (2009) compare children’s understanding of the purpose of television advertising and non-spot advertising (e.g., product placement). Both academics and public policy officials highlight the need for further research to clarify this novel marketing communication technique with regard to its effects on children (e.g., Friestad/Wright 1999; Marshall 2010; Moore 2004). This issue is of particular interest because the subtle nature of product placement has raised concerns that marketers might gain an unfair influence over young people (e.g., Mallalieu/Palan/Laczniak 2005; Moore 2004). Knowledge about children’s ability to understand product placement thus is needed to design and implement interventions and protect children (McAlister/Cornwell 2009).

The present study offers the first comprehensive investigation of how well children of different ages understand product placement. According to Robertson/Rossiter (1974) and Mallalieu/Palan/Laczniak (2005), children can understand the product placement concept if they possess four capabilities: (1) to recognise the product placement’s external source, (2) to perceive its intended audience, (3) to identify its symbolic nature (these three capabilities reflect understanding of the characteristics of product placement); and (4) to understand the intentions underlying product placement.

The remainder of this article is organised as follows: Section 2 builds on research on children and advertising and discusses children’s understanding of the characteristics and underlying intentions of marketing communication messages, across different age groups. On the basis of this framework, Section 3 explores children’s understanding of product placement. A qualitative exploratory study with children 6–14 years of age produces propositions, tested in a quantitative empirical study. Finally, Section 4 outlines the implications of these findings for researchers and policy makers, some study limitations and further research opportunities.

2. Children’s understanding of marketing communication

Different indicators are needed to capture children’s ability to understand the commercial information context and its components (Macklin 1987). Various studies suggest that children should be able to understand the characteristics and underlying intent of commercial messages to evaluate them (e.g., Mallalieu/Palan/Laczniak 2005; Moore 2004; Oates et al. 2003; Robertson/Rossiter 1974). Full comprehension of the underlying intentions of a marketing message requires understanding of the message’s characteristics (John 1999). Children thus need four capabilities to understand marketing communication messages (Mallalieu/Palan/Laczniak 2005; Moore 2004; Oates et al. 2003; Robertson/Rossiter 1974), that is, to (1) recognise the external source of the message, (2) perceive its intended audience, (3) identify its symbolic nature (i.e., the characteristics of marketing communication), and (4) recognise its underlying motivations (i.e., the intentions of marketing communication). Robertson/Rossiter (1974) also argue that children who understand intentions become more sceptical and better able to resist the message’s appeal.

In their learning process, children also exhibit different levels of understanding of marketing communication messages (Andronikidis/Lambrianidou 2010). This development mainly has been analysed in relation to age-based changes, relying on Piaget’s theory of cognitive development as an indicator of children’s cognitive states (e.g. Mallalieu/Palan/Laczniak 2005; Moses/Baldwin 2005; Oates/Blades/Gunter 2002; Owen et al. 2009; Robertson/Rossiter 1974). Because research on children’s understanding of novel marketing communication techniques is scarce, this study uses television advertising studies to explore the developmental sequence by which children come to understand the characteristics and underlying intentions of marketing communication messages. This discussion frames the empirical study in the product placement context.

2.1. Characteristics of marketing communication messages

Young (1990) suggests that children who understand advertising must be able to recognise that an external source deliberately creates advertisements. This basic level of understanding becomes more sophisticated as children begin to comprehend who pays for the advertisements, who makes them and who benefits from them. Focus group research (Andronikidis/Lambrianidou 2010; Mallalieu/Palan/Laczniak 2005; Oates et al. 2003) shows that 6-year-olds are irritated by who makes ads and why, as well as by learning that someone pays for them. The concept of an author or financier of advertising thus causes confusion for children of this age. Around the age of 10 (Oates et al. 2003) or 11 (Andronikidis/Lambrianidou 2010; Mallalieu/Palan/Laczniak 2005) years, children start to understand that the compa-
nies that sell the products pay advertising companies to make commercials. This growing understanding conforms with the developmental stages identified by Robertson/Rossiter (1974), such that children advance from no perception of an external source to some confused notions to an explicit understanding of the sponsorship concept.

In a comparable sequence, children advance from a total lack of audience perception to an egocentric view, in which all commercials appear aimed at them. Only later do they realise that advertising is also directed at their peers; that is, they grasp that commercials are targeted to a broad audience. Finally, children recognise that commercials are directed at specific segments of the viewing audience (Robertson/Rossiter 1974). Mallalieu/Palan/Laczi\'niak (2005) show that children around the age of 11 years understand that specific ads are designed for specific target segments and thus begin to grasp the idea of segmentation.

With regard to the symbolic nature of advertising, Robertson/Rossiter (1974) again identify a developing sequence. Children initially demonstrate no appreciation of the symbolic nature of commercials, then show some implicit recognition of the distinction between images and reality, though without a clear expression of the representational strategies used to present the product. Finally, children recognise the symbolic devices used in the majority of commercials, such as idealised settings for product display, dramatised character emotions, or celebrity endorsements. Mallalieu/Palan/Laczi\'niak (2005) show that children aged 5–7 years are unable to articulate the association between celebrities and certain products. Because their ability to differentiate reality from imagery is limited, they also cannot articulate whether ads are exaggerated or if show content is not real. Moore/Lutz (2000) conduct individual depth interviews with 7–8-year-olds and with 10–11-year-olds and find that it is difficult for younger children to understand the figurative language of commercials. They assume that products are as depicted in advertisements and do not mistrust commercials. Older children instead have learned that advertisements are fantasy-laden and not to be taken literally.

2.2. Intentions of marketing communication messages

A true understanding of advertising requires children to recognise its functional features (Oates/Blades/Gunter 2002), including the underlying motivations, such as persuasive, informational, promotional or manipulative intent (Robertson/Rossiter 1974). Many studies emphasise the importance of understanding the persuasive intent of advertising, which is a critical skill to support children’s ability to defend themselves against advertising persuasion attempts and possible disadvantage (Mallalieu/Palan/Laczi\'niak 2005; Wright/Friestad/Boush 2005). To gain this understanding, children must possess a perspective-taking ability, such that they can consider both the buyer’s and the seller’s viewpoints (Moore 2004; Selman 1980). This ability in turn involves the capacity to distinguish one’s own wants and needs from the desires of others, such as advertisers (McAlister/Cornwell 2009). In contrast with children’s perspective that advertisements show products ready to buy in a store, the persuasive function describes advertising from the seller’s perspective (Macklin 1987). Children must recognise that the seller profits financially through sales and therefore induces consumers to buy its products (Moses/Baldwin 2005). This persuasive intent may be equated with selling intent (Martin 1997). Oates/Blades/Gunter (2002) report that understanding of the persuasive function does not develop widely before the age of 8 years, and for many children, persuasion remains difficult to understand at the age of 10 years. However, Andronikidis/Lambri\'anidou (2010) assert that whereas 6–7-year-olds perceive advertisements mainly as interruptions of their programs, most 8–9-year-olds and all 10–11-year-olds understand their persuasive intent.

3. Children’s understanding of product placement

Children’s understanding of product placement offers an emerging research field. In line with research in the domain of advertising and children, understanding product placement implies that children understand the characteristics (i.e., correct recognition of the external source of the product placement, perception of its intended audience and identification of its symbolic nature) and underlying intentions of product placements. At this exploratory stage of research, this study seeks insights into age-based changes in children’s ability to understand product placement, as well as determine if knowledge gleaned from prior advertising studies generalises to a product placement context. Therefore, this study begins with a qualitative approach (Section 3.1), whose outcomes inform the propositions (Section 3.2) tested in a quantitative empirical study (Section 3.3).

3.1. Qualitative study

3.1.1. Stimulus material

Children viewed a film clip with a product placement, namely, a 47-second clip from the cartoon film Alvin and the Chipmunks 2 in which the main character Alvin used an Apple iPhone to talk to his friends and help them out of a tricky situation. The Apple iPhone product placement is not mentioned by name, but the phone is in evidence throughout the clip, including the display of an Apple logo on the iPhone for a couple of seconds. Alvin and the Chipmunks 2 was selected because the film targets children from approximately 6 to 14 years. The clip also displays the Chipmunks in an unbranded school environment, while prominently using the product placed in the film.
1. What were they doing?
2. Can you think of anything else?
3. Were they talking to each other face-to-face or talking over the phone?
4. With which phone were they talking?
5. Was it a mobile phone?
6. What colour was it?
7. Was it a normal mobile phone or a more sophisticated one with more features?
8. What was the name of the mobile phone?
9. Why did the iPhone appear in the clip?
10. Why didn’t they use another mobile phone (instead of the iPhone)?
11. Do you think that anybody has to pay for the iPhone being placed in the movie?
12. Who should be attracted to the iPhone?
13. Has Alvin anything in common with the iPhone?

3.1.2. Data collection

Sixteen children, ranging in age from 6 to 14 years, from the same school watched the film clip: two first graders (6–7 years), two second graders (7–8 years), and so forth, up to two eighth graders (13–14 years). The research took place in a Central European city. All participants were nationals of that country and came from middle-class backgrounds. Furthermore, all children had access to television at home on a regular basis. Their participation followed only after parents signed consent forms. The interviewer introduced herself by saying that she used to go to the same school, which calmed the children. The children then were interviewed individually in a child-friendly room in the school building. In line with suggestions from Moore/McArthur/Noble-Carr (2008) the interviewer and each child sat on the floor on a blanket during the whole procedure, which helped reduce the power differential between interviewer and interviewee and made the adult feel a little uncomfortable, while the child became very comfortable. At the start of each session, the interviewer briefly explained that the child would be watching a film clip and answering ‘a few easy questions’.

The method adopted was a semi-structured interview, designed to generate a free-flowing conversation (Banister/Booth 2005). Flexible questions should lead to more deliberate responses than closed questions and provide better insights into the interviewees’ views, understanding, experiences and opinions (Silverman 2006). This procedure also allowed the interviewer to be sensitive to the specific dynamics of each interaction. After showing the film clip, the interviewer asked the children to describe in detail what they had seen. To assess their understanding of product placement, specific probing questions were developed, in line with prior research (e.g., Andronikidis/Lambrianidou 2010; Mallalieu/Patani/Laczniak 2005; see Tab. 1). The questions were simple enough to be answered by 6-year-olds but also enabled additional probing if the child’s answer caused the interviewer to seek more information. Close attention centred on whether the child was able to (1) recognise the external source (Apple pays for the product placement), (2) perceive the intended audience of the movie (children), (3) grasp the symbolic nature of the product placement (Alvin endorses the product and symbolises a ‘cool’ child), and (4) understand the underlying intentions.

After completing the interview, children were debriefed and asked not to talk about the film or the questions with their schoolmates until everyone had completed the study. The entire procedure took 10 to 15 minutes per child to complete.

3.1.3. Results

The data analysis relied on a qualitative content analysis (Mayring 2000), to simplify and reduce the large amounts of data into organized segments (Marvasti 2004). The authors followed a deductive approach, such that theoretically derived categories for understanding a product placement’s characteristics and intentions served as the basis for the qualitative data analysis. A first examination of the data indicated that these four categories were sufficient to capture the richness of the data. The coding categories and definitions appear in Tab. 2.

Tab. 3 summarises the results of the qualitative study with respect to different age groups. For the product placement’s external source, children between 6 and 9 years of age either did not understand that Apple had to pay for the iPhone’s appearance in the movie or showed considerable confusion about the concept. After the age of 10 years, most children were able to identify the external source of the product placement. As far as the intended audience of the product placement is concerned, the results showed that young children, between 6 and 9 years of age, could not identify themselves as the target audience of the product placement. Again, after the age of 10 years, the majority of children showed considerable understanding. A similar outcome emerged for the product placement’s symbolic nature. Children between 6 and 9 years had severe difficulties recognising that Alvin endorses the Apple iPhone and symbolises, for example, ‘coolness’ in a way similar to the Apple iPhone. From the age of 10 years, almost all the children grasped that Alvin and the product placement had something in common. Finally, children between 6 and 9 years of age could not understand the underlying intentions of the
product placement and were confused about the concept. Between the ages of 10 and 12 years, many children still had problems understanding the company’s motivations for the product placement, but those older than 12 years largely demonstrated a full understanding of the underlying intentions of the marketer. In terms of the different functional features of the underlying intentions, children were particularly capable of articulating the persuasive and promotional intents of the product placement. Overall, a clear developmental sequence thus emerged for the four categories of interest. The results of this qualitative study in turn suggest research propositions for testing with a quantitative empirical study design.

3.2. Propositions

3.2.1. Age and children’s understanding of product placement

Qualitative insights into age-based changes in children’s understanding of product placement characteristics suggest that children manage to understand the outlined categories at an age similar to that at which they understand television advertisements. This conclusion is in accordance with literature on cognitive development and consumer socialisation (e.g., John 1999; Selman 1980). Therefore, 

P1: Children’s understanding of product placement characteristics (external source, target audience, and symbolic nature) develops at the same age as their understanding of television advertising characteristics, that is, approximately 10 years.

The results of the qualitative study also suggest that children can fully understand product placement’s underlying persuasive and promotional intentions at the age of 12 or 13 years. This finding implies a delay of approximately two years, after their understanding of persuasion in television advertising. This delay is comparable to that which arises for other, subtle marketing communication tools (Grohs/Wagner/Steiner 2012). Panic/Cauberge/De Pelsmacker (2012) show that the mechanisms underlying the persuasion process differ for advergames, because it is more difficult for children to recognise the persuasive intent of advergames than of television commercials. It appears that advergames bypass persuasion knowledge and persuade children implicitly. Moschis/Moore (1979) and Obermiller/Spangenberg (2000) similarly argue that children’s comprehension of novel com-

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**Table 2: Coding categories and coding scheme**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Definition</th>
<th>Verbatim examples</th>
<th>Coding scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognition of external source</td>
<td>The child recognises that the mobile phone producer (Apple) is paying for the iPhone being shown in the movie.</td>
<td>‘Hummm, it was not mentioned in the movie, but I think so. Those people who watch the movie have to pay for it. No... those people, who produced the movie. I don’t really know.’ (Boy, 9 years) ‘The producer of the product has to pay to make sure that his products turn up in the movie.’ (Girl, 13 years)</td>
<td>A: Full recognition. B: Partial recognition. C: No recognition.</td>
</tr>
<tr>
<td>Perception of intended audience</td>
<td>The child understands that the Apple iPhone appears in the children’s film because children should be attracted to the product.</td>
<td>‘The mobile phone is intended for adults. It is nothing for children.’ (Boy, 9 years) ‘Children and teenagers see the mobile phone and want to buy it.’ (Boy, 12 years)</td>
<td>A: Full perception. B: Partial perception. C: No perception.</td>
</tr>
<tr>
<td>Identification of symbolic nature</td>
<td>The child understands that Alvin (the main character) serves as a celebrity endorser by using the Apple iPhone.</td>
<td>‘Because Alvin has the star role. Of course, it is a good thing when people see him on the iPhone.’ (Girl, 11 years) ‘The iPhone is very popular among people, same as Alvin.’ (Boy, 13 years)</td>
<td>A: Full identification. B: Partial identification. C: No identification.</td>
</tr>
<tr>
<td>Understanding of underlying intentions</td>
<td>The child understands the persuasive and promotional intent.</td>
<td>‘Because it is lightweight. It can take pictures and it provides great games.’ (Boy, 8 years) ‘... to make sure that people see that it is a good mobile phone. People should go and buy the phone thereupon.’ (Girl, 14 years)</td>
<td>A: Full understanding. B: Partial understanding. C: No understanding.</td>
</tr>
</tbody>
</table>

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**Table 3: Results of qualitative study by age groups**

| Categories                                      | Age groups
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Recognition of external source</td>
<td>6–9 years</td>
</tr>
<tr>
<td>Perception of intended audience</td>
<td>No recognition / Confusion</td>
</tr>
<tr>
<td>Identification of symbolic nature</td>
<td>No perception</td>
</tr>
<tr>
<td>Understanding of underlying intentions (persuasive and promotional)</td>
<td>No understanding / Confusion</td>
</tr>
</tbody>
</table>
communication tactics and appeals used by marketers, as well as their understanding of the role that marketing communication plays, is not consolidated until they reach early adolescence. Therefore,

**P2: Children’s understanding of product placement’s underlying intentions (persuasive and promotional intentions) develops later than their understanding of television advertising’s underlying intentions, that is, at approximately 12 years.**

3.2.2. Individual characteristics and children’s understanding of product placement

Although age alone explains just a portion of children’s understanding of marketing communications (Marshall 2010; Martin 1997), few other variables have been investigated. The most important other drivers of children’s understanding of marketing communications appear to be their social environment (John 1999) and personal experiences (Oates et al. 2003). Family provides a considerable buffer against undesirable media influences, such that John (1999) argues that the parents’ education and the number and age of siblings foster children’s knowledge of popular brands and understanding of consumption symbolism. McAlister/Cornwell (2009) also highlight the role of sibling interactions and propose that researchers should consider their influence on understanding marketing communication. Boys and girls seem to develop their understanding in similar ways (Bijmolt/Claussen/Brus 1998). In addition, Martin (1997) suggests that the degree and type of (media) exposure may affect children’s understanding of promotional messages. Children themselves mention ‘learning by doing’ (e.g., watching TV) as an important socialisation mechanism by which they acquire advertising knowledge, beyond that provided by their parents (Mallalieu/Palan/Laczniak 2005). Thus,

**P3: Children’s understanding of product placement (recognition of external source, perception of target audience, identification of symbolic nature, and understanding of underlying intentions) is positively associated with (a) the higher education of their parents, (b) the presence of siblings, (c) the presence of older siblings, and (d) previous exposure to the examined media content (e.g., movie).**

3.3. Quantitative study

3.3.1. Data collection

To test these three propositions, the research procedure asked children to view the same film clip used in the qualitative study. The film clip was shown to 160 children from the same school, who were between 6 and 15 years of age (20 first graders, 20 second graders, and so forth, up to 20 eighth graders). Then the children filled out a questionnaire. The research instrument was easy to follow, and its questions were particularly simple to answer. The questions and answers were read out loud to the first and second graders, considering their limited reading and writing capabilities. Consent forms for participation in the study were sent to the parents one week before the investigation.

The questionnaire consisted of several blocks of yes/no questions about the reasons for product placement, to measure the four factors that describe children’s understanding of product placement. The children chose the correct answer(s) in each block. Respondents classified these statements by either circling an image of Alvin (first to fourth graders) or ticking a box (fifth to eighth graders) at the beginning of each statement. In addition, children indicated whether they knew the product before the study (the front and back view of the Apple iPhone served as a cue) and provided the name of the mobile phone if they could.

Each child’s age was the primary driver of interest. In line with P3 though, data also were collected related to the (a) education of the parents (mother and father, information provided on the consent forms), (b) presence of siblings, (c) presence of older siblings, and (d) previous exposure to the movie.

3.3.2. Measures

To measure understanding of the external source of product placement, children were instructed to choose among three items: (1) The mobile phone is used in the movie because the mobile phone company pays for showing it, (2) The mobile phone is used in the movie because it looks great, and (3) The mobile phone is used in the movie because there is no other hand. The children understood the external source if they evaluated all three items correctly, that is, by choosing the first option as the correct one. The measures of understanding the intended audience and the symbolic nature of the product placement relied on a choice task (children had to pick two out of four responses listed). Specifically, to measure understanding of the product placement’s intended audience, the key item was (1) The mobile phone appears in this movie because many children like to watch the movie, and to assess their understanding of the symbolic nature of the product placement, the central item stated (2) The mobile phone appears in the movie because Alvin is cool; then the two alternative response options were (3) The mobile phone appears in the movie because it is fashionable and (4) The mobile phone appears in the movie because the film would be too boring otherwise. Understanding product placement’s intended audience existed if the children chose statement (1), and understanding of its symbolic nature was achieved if they picked statement (2).

With regard to understanding underlying intentions, children were instructed to pick two (out of four) items in the questionnaire that reflected the underlying intentions (persuasive and promotional intent) of the product placement: (1) The mobile phone appears in the plot of the movie because people should speak about it, (2) The
Recognising the external source
Perceiving the target audience
Identifying the symbolic nature
Understanding the underlying intentions

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Coefficient</th>
</tr>
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<tbody>
<tr>
<td>Age</td>
<td>.28**</td>
</tr>
<tr>
<td>Education mother:</td>
<td></td>
</tr>
<tr>
<td>Compulsory school</td>
<td>.24</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>.05</td>
</tr>
<tr>
<td>Vocational school</td>
<td>.16</td>
</tr>
<tr>
<td>High school</td>
<td>-.48</td>
</tr>
<tr>
<td>Education father:</td>
<td></td>
</tr>
<tr>
<td>Compulsory school</td>
<td>.70</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>-.40</td>
</tr>
<tr>
<td>Vocational school</td>
<td>-.72</td>
</tr>
<tr>
<td>High school</td>
<td>.18</td>
</tr>
<tr>
<td>Presence of siblings</td>
<td>.61*</td>
</tr>
<tr>
<td>Presence of older siblings</td>
<td>-.21</td>
</tr>
<tr>
<td>Previous exposure</td>
<td>-.25</td>
</tr>
<tr>
<td>Constant</td>
<td>-.246*</td>
</tr>
</tbody>
</table>

**Goodness-of-Fit**
LR test: Chi-Square (df = 12) 28.0**
Nagelkerke’s R²  .22

Table 4: Logistic regression results

mobile phone appears in the plot of the movie because I should buy it, (3) The mobile phone appears in the plot of the movie to make sure that the movie goes on, and (4) The mobile phone appears in the plot of the movie to make sure that the movie ends with a happy end. Correct (full) understanding of product placement’s underlying intentions was recorded if all four items were evaluated correctly, that is, children chose statements (1) and (2).

In turn, these measures of recognising the external source, perceiving the target audience, identifying the symbolic nature, and understanding the underlying intentions of product placement served as binary dependent variables in the subsequent analyses (0 = no understanding, 1 = understanding). Finally, the parents’ education levels were measured with five categories: ‘compulsory school’, ‘apprenticeship’, ‘vocational school’, ‘high school’, and ‘university degree’. To account for the presence of siblings and older siblings, the respective number of siblings was recorded. Previous exposure to the movie featured the categories ‘never’, ‘once’, ‘twice’, ‘three times’, and ‘more often’.

3.3.3. Results

Overall, 95.6 % of the children had seen an Apple iPhone before the study, and 91.9 % correctly cited its name. Moreover, 61.9 % of respondents were able to recognise the external source and perceive the target audience, whereas 46.3 % were able to identify the symbolic nature of the product placement. Full understanding of the product placement’s underlying intentions was achieved by 45.6 % of the children. These forms of understanding also represented the criteria for the subsequent dependence analyses, with drivers of understanding as the independent variables. Tab. 4 summarises the results of the four binary logistic regressions. First, older children better recognised the external source (p < .01), correctly identified the target audience (p < .05) and understood product placement’s underlying intentions (p < .01). Second, age did not significantly influence children’s identification of the product placement’s symbolic nature. Rather, the older the children were, the less they tended to identify the symbolic nature. This result is both surprising and counterintuitive. Third, children with more siblings had a higher propensity to recognise the external source (p < .05). Fourth, children whose fathers had a university degree perceived the target audience better than children whose father had an apprenticeship as his highest education (p < .01), and similarly, children whose mothers had a university degree understood the product placement’s underlying intentions better than children with less educated mothers (p < .01 for compulsory school, p < .05 for all other education categories). None of the other independent variables exhibited a significant influence in the respective models. In terms of goodness-of-fit, the estimated models (except for the model to identify the symbolic nature of the product placement) outperformed a constant-only model in a likelihood-ratio test, exhibiting an acceptable fit coefficient.
Fig. 1 graphically depicts a sensitivity analysis of the influence of age on understanding the external source, intended audience, and underlying intentions of product placement. Sensitivity analysis is a useful technique for interpreting logistic regression coefficients (Krafft 1997), in this approach, the value of an independent variable is modified systematically to show the effect on the criterion (with all other independent variables held constant). To compare quantitative and qualitative results, Fig. 1 shows the logistic regression results, with age as the sole independent variable. The findings indicate similar probabilities of understanding the external source and intended audience, whereas the probabilities of understanding the underlying intentions are considerably smaller. This quantitative approach confirms the results of the qualitative study: After the age of 9 years, the majority of the children recognised the external source and correctly perceived the target audience of the product placement (probabilities exceeding 0.5). From the age of 12 years on, they largely understood the product placement’s underlying intentions.

4. Conclusion

This research has implications for policy makers and consumer researchers investigating the effects of product placement and other embedded marketing communication instruments on children. In particular, this study offers better insight into children’s understanding of product placement. Children exhibit a functional understanding of the product placement concept in relation to its external source, target audience and symbolic nature (in the qualitative study) at the age of around 9 to 10 years. Once children reach 12 to 13 years of age, they largely understand the underlying intentions of product placements too. The delay of approximately two years, compared with the age at which they understand more overt communication instruments such as television commercials, appears caused mainly by the subtlety of the product placement, not by problems with their conceptual understanding of product placement (e.g., unlike television advertising, product placement is not announced by separate messages before and after it appears). Because few children have developed sensitivity to the subtlety of this novel technique (Avery/Ferraro 2000), they tend to be more prone to product placement’s influence than adults (Law/Braun 2000). Yet regulations on product placement aimed at children are scarce, and it remains parents’ responsibility to guide and educate their children (Hudson/Hudson/Pelozzi 2008).

Because children have limited knowledge of product placement, they lack the cognitive skills and life experiences to evaluate these marketing communications in a critical way and to resist their persuasive claims. In the quest to protect children from covert marketing communication activities, policy makers and consumer organizations should build on this study to (1) help children increase their understanding of product placement’s features and intentions, (2) show them how to use their knowledge to resist persuasion, and (3) potentially introduce regulations on product placement aimed at children. The present study also suggests valuable insights for designing educational interventions that may help children overcome processing difficulties and arouse scepticism toward product placements.

A second major contribution of this study is the application of the proposed procedures to an investigation of children’s understanding of embedded marketing communication in general. Embedded marketing communication by definition is subtle, sophisticated and often interactive, such that multi-media commercial messages become integrated into the surrounding context (Grohs/Wagner 2011). This research provides a refined framework for analysing children’s understanding of product placement that can be extended to other novel embedded marketing communication contexts, such as advergames, sponsorship or licensing. A deeper understanding of children’s capacities then can provide the basis for discussions about the fairness of such marketing activities targeted at children (Moore 2004), a consumer segment that is still learning what marketing communication is and how it works (Moore/Rideout 2007).

However, this study also is exploratory in nature. The measures of children’s understanding of product placement have been developed from scratch and thus require further validation. In particular, the scale item used to measure the symbolic nature of product placement may be problematic, which may explain the counterintuitive, non-significant effect of children’s age. Young children tended to agree with the statement ‘The mobile phone appears in the movie because Alvin is cool’, but perhaps they did so for reasons other than those adults would cite (i.e., they literally believe that Alvin is cool, while adults view Alvin as a celebrity endorser for the mobile phone brand). Older children in their early adolescence instead might reject the statement, simply because they do not consider Alvin the chipmunk ‘cool’ anymore. Therefore, additional analyses are required to untangle at what age children begin to comprehend the symbolic nature of a product placement. Finally, the placed product may have influenced the results; Apple iPhones are extremely popular among children. Further research thus should assess
children's understanding of product placements for other brands and product categories, perhaps in other sites, such as music videos or television shows.

Overall, the findings of this study benefit policy makers and consumer organizations because they provide valuable insights into the ages at which children still need protection from subtle marketing communication activities such as product placement. From a research perspective, this study enhances understanding of how children develop knowledge of the product placement concept and provides a point of departure for additional studies that aim to understand how children cope with novel marketing communication techniques.

References


Keywords
product placement, children, cognitive development

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