

Children's understanding of advertisers' persuasive tactics

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The aim of this study was to investigate children's understanding of six popular tactics used by advertisers to elicit certain advertising effects, including ad repetition, product demonstration, peer popularity appeal, humour, celebrity endorsement and premiums. We first asked 34 advertisers of child products to indicate what kind of effects (e.g. ad or product recall, learning and liking) they intend to elicit by using each of the six tactics. Subsequently, in a survey among 209 children (aged 8–12) and 96 adults (>18), we investigated the extent to which children understood advertisers' intended effects of these tactics and how this compared to an adult benchmark. Results showed that children's understanding of advertisers' tactics increased progressively between the ages of 8 and 12, showing a significant increase around age 10. The age at which children reach an adult level of understanding differed by tactic. For example, the use of celebrity endorsement was generally understood at an earlier age than other tactics, whereas product demonstration was understood at a later age.

Ever since children were recognised as a lucrative target consumer group, child-directed advertising has been the subject of extensive concern and debate. Recently, however, in both the societal and academic area this subject has gained increased attention, mainly because dramatic changes have taken place in children's commercial media environment (Moore 2004; Calvert 2008). Today's children are not only targeted more often and at a much younger age than earlier generations, but advertisers are also rapidly adopting new advertising venues, such as children's websites and games. The changes in children's commercial media environment have reignited public and academic interest in child-directed marketing, mainly focusing on advertising for unhealthy foods (e.g. Moore & Rideout 2007).

A central question in the child and advertising debate is to what extent children are able to process advertising in a conscious and critical way. To do so, children should first of all be able to differentiate advertising from

other media content (e.g. television programmes, editorial web content). Second, they have to understand that advertisers attempt to influence their purchase behaviour. Third, children should be aware that advertisers attempt to influence this behaviour by changing their attitudes and cognitions about the product or ad, and fourth, they need to understand the specific ways in which advertisers try to persuade them to buy the advertised products (John 1999; Kunkel *et al.* 2004). This advertising-related knowledge and understanding is often referred to as 'advertising literacy' (e.g. Young 1990; Livingstone & Helsper 2006). Detailed insight into the development of children's advertising literacy is important, because it is generally assumed that children who are able to process advertising critically are less likely to be unfairly influenced by advertising (Bandyopadhyay *et al.* 2001; Kunkel *et al.* 2004).

Academic research on children's advertising literacy has focused mainly on the development of their ability to differentiate advertising from other media content (i.e. advertising recognition) and to understand advertisers' selling and persuasive intent. However, little is known about children's understanding of *how* advertisers attempt to change their attitudes, cognitions and behaviours – that is, which tactics advertisers use to elicit certain effects. To our knowledge, only one study has investigated this systematically. Boush, Friestad and Rose (1994) examined 11- to 14-year-old children's understanding of various advertiser tactics and compared their understanding to an adult level. However, developmental theories suggest that the most important developmental changes in children's advertising literacy occur well before the age of 12 – in other words, before the ages investigated by Boush *et al.* (John 1999; Gunter *et al.* 2005). Indeed, studies using a qualitative approach show that elementary school children (aged 8 and over) are able to identify and, to some extent, give meaning to some commonly used persuasive tactics (Moore & Lutz 2000; Lawlor & Prothero 2003; Mallalieu *et al.* 2005). However, to date, systematic research among this younger age group is still missing.

The aim of the present study, therefore, is to investigate 8- to 12-year-old children's understanding of advertisers' persuasive tactics. To be more precise, in a survey among 209 children and 96 adults, we investigate two important developmental changes in children's understanding – that is (1) the age at which 8- to 12-year-old children show significant shifts in their understanding of advertisers' tactics and (2) the age that their

understanding reaches an adult-like level. In the literature, it is generally assumed that children's advertising literacy develops gradually up to an adult level. Following this line of reasoning, such an adult level would represent a benchmark for children's literacy. Therefore, a starting point for research on children's advertising-related knowledge should be to compare children's and adults' levels of this knowledge. Remarkably, there is a paucity of theorising about adult understanding of advertising (Wright *et al.* 2005). In addition, the few theoretical models that can be found in the literature typically represent idealised levels of advertising literacy and have not addressed adults' actual advertising understanding (Roberts 1983; Friestad & Wright 1994).

It is important to empirically investigate the level of adult-like advertising literacy, because it is unlikely that all adults have perfect or ideal advertising understanding. Unfortunately, empirical investigations of adult-level advertising literacy are missing (Wright *et al.* 2005). By including adults' understanding of advertisers' tactics in our study, we create an adult benchmark to which we can compare children's levels of understanding. This comparison will allow for meaningful interpretation of the observed levels of children's understanding. Because research on children and advertising originates from the concern that children are more vulnerable to advertising effects than are adults (Bandyopadhyay *et al.* 2001; Kunkel *et al.* 2004), the comparison between children and adults is central to research investigating the developmental progression in children's advertising literacy (Wright *et al.* 2005). In order to come to specific hypotheses and research questions, we first discuss the literature on the development of advertising literacy and on the persuasive tactics of advertisers.

The development of advertising literacy

Research into children's advertising literacy relies heavily on frameworks established by developmental psychologists. The developmental changes children undergo in socio-cognitive and information-processing capabilities are thought to explain many of the developments observed in their advertising knowledge and understanding (e.g. John 1999; Kunkel *et al.* 2004; Gunter *et al.* 2005). Most studies have been inspired by Piaget's (1929) theory of cognitive development, although other theoretical

approaches have also been used, including theories of information processing (see Roedder 1981), social perspective taking (Selman 1980), Piaget's (1952) perspective on affective development (see Phelps & Hoy 1996) and, more recently, the 'theory of mind' paradigm (see Moses & Baldwin 2005). Based on these approaches three developmental phases can be distinguished: early childhood (younger than 5 years old), middle childhood (6 to 9 years) and late childhood (10 to 12 years). Within each phase, children accumulate socio-cognitive and information-processing skills that positively affect the development of specific components of advertising literacy (Buijzen *et al.* 2010).

In early childhood (up until the age of 5), children have a limited ability to take a perspective other than their own, which inhibits their understanding of advertisers' intentions. Empirical studies have shown that, by the age of 5, about three-quarters of children can recognise advertising, but only based on perceptual features (e.g. Butter *et al.* 1981; Levin *et al.* 1982; Stephens & Stutts 1982). As children enter middle childhood (6 to 9 years), they become increasingly capable of perspective taking and contingent thought, and develop a basic understanding of advertising's intent. Empirical studies have shown that, by the age of 8, most children are able to understand advertising's selling intent – that is, advertisers' intent to influence purchase behaviour (e.g. Rubin 1974; Bever *et al.* 1975; Wilson & Weiss 1992).

In late childhood (10–12 years) children become capable of abstract thought and reasoning, and are able to see things within a broader perspective. They are not only able to understand that others may not always share the same perspective, but they are also more and more able to simultaneously consider another person's viewpoint at the same time as their own. It is not before children enter this phase that they develop an understanding of the persuasive intent of advertising – that is, the intent to influence purchase behaviour by changing consumers' attitudes and cognitions (Rozendaal *et al.* 2010). Moses and Baldwin (2005) have argued that understanding persuasive intent involves an appreciation of second-order mental states (i.e. the insight that advertisers attempt to change one's mental state) and, therefore, requires a higher developmental level than understanding selling intent.

We expect that late childhood is also the phase in which children develop an understanding of *how* advertisers attempt to change their atti-

tudes, cognitions and behaviour by using certain persuasive tactics – that is, to understand why advertisers use particular persuasive tactics, children should not only be able to consider advertisers' perspectives, but should also be able to reason on an abstract level about the effects particular tactics could elicit among viewers in a particular situation (John 1999). Therefore, we would expect children's understanding of advertisers' tactics to show a significant increase around the age of 10:

H1: Eight- to 12-year-old children show a significant increase in their understanding of advertisers' persuasive tactics around age 10.

Another important developmental change in children's understanding of advertisers' persuasive tactics is the moment this understanding reaches an adult level. Based on developmental theories, most researchers assume that children's cognitive advertising competences, including the ability to understand advertisers' tactics, fully develop around the age of 12 (see Gunter & Furnham 1998; Valkenburg & Cantor 2001). However, the only study that has investigated children's understanding of advertisers' tactics showed a divergent developmental pattern (Boush *et al.* 1994).

Boush *et al.* (1994) found that 11- to 14-year-olds' understanding of advertisers' tactics increased with age, yet at age 14 this understanding was still not comparable to an adult level – later than is to be expected based on developmental theories. A possible explanation for this unexpected finding is that their study included university students as an adult benchmark. A disadvantage of a student sample is that, due to differences in their overall intellectual abilities or economic advantages, they are not representative of the general adult population. Consequently, in Boush *et al.*'s (1994) study, adult levels of understanding advertisers' tactics may have been overestimated. Therefore, to come to generalisable conclusions, the present study includes adults of various ages and socio-economic backgrounds as a representative adult benchmark. Because empirical research investigating children's understanding of advertisers' tactics is too scarce to come to a specific research hypothesis, we investigate the following research question:

RQ1: Do children reach an adult level of understanding advertisers' persuasive tactics and, if so, at what age does that occur?

Persuasive tactics in child-directed advertising

Over the past few decades, advertisers have developed a wide array of persuasive tactics to influence children's responses to advertisements, and the advertised products and brands. From the literature, six persuasive tactics can be identified that are frequently used in child-directed advertising and are found to be effective (Boush *et al.* 1994; Buijzen & Valkenburg 2004; Valkenburg 2004; Calvert 2008): ad repetition (the advertisement is repeated several times); product demonstration (the advertisement shows how a product works); peer popularity appeal (the advertisement shows one or more children eating or playing with the advertised product); humour (the advertisement is funny); celebrity endorsement (the advertisement shows a popular cartoon character, TV or music star presenting the product); and premiums (the advertisement promises a freebie to go with the purchase of the product).

In order to investigate children's understanding of advertisers' tactics, it should be clear which effects advertisers wish to elicit when using these persuasive tactics in an advertisement. In the literature, the effects advertisers wish to achieve are generally referred to as 'intended effects' (Buijzen & Valkenburg 2003), which can be categorised into three main types: (1) cognitive effects, such as children's recall or recognition of ads and brands; (2) affective effects, such as children's liking of ads and brands; and (3) behavioural effects, such as children's purchase of or requests for the advertised brands (Rossiter 1979; Valkenburg & Buijzen 2005). Unfortunately, the advertising literature does not provide decisive conclusions on which specific effects advertisers generally intend to elicit with certain persuasive tactics. Besides, it is conceivable that a tactic is aimed to elicit several effects (Calvert 2008). So how can we determine children's levels of understanding without having a definition of what a correct understanding of advertisers' tactics includes?

Boush *et al.* (1994) solved this issue by interviewing a number of adults about advertisers' intentions with certain tactics in television advertisements, and used these intentions as a starting point for their research. In the present study we followed a similar procedure, but opted to take into account a more expert view on advertisers' intended effects. More specifically, our starting point will be the perspectives of advertisers themselves. To identify the effects advertisers wish to elicit when applying certain advertiser tactics, we

survey a group of advertisers of children's products. Because each tactic may be associated with several (cognitive, affective and behavioural) intended effects, we use advertisers' rank-ordering of effects as a starting point.

In sum, the present study contributes to the existing advertising literacy literature in three ways. First, we systematically investigate the understanding of advertisers' tactics among children under the age of 12. More specifically, we examine the development of children's understanding of the effects advertisers try to elicit with six frequently used persuasive tactics (i.e. ad repetition, product demonstration, humour, peer popularity appeal, celebrity endorsement, and premiums). Second, we compare children's understanding to a representative adult sample to provide a meaningful interpretation of child responses. Finally, we use expert (i.e. advertisers') views on the intended effects of advertisers' tactics as a norm for correct understanding.

Method

In this survey study, we first asked advertisers of children's products what kind of effects they intended to elicit by using the six tactics. Then, we investigated children's understanding of these tactics. Finally, we compared children's levels of understanding with an adult benchmark.

Participants and procedures

Advertisers

To identify the intended effects of the six tactics, a total of 34 advertisers, mainly brand or product managers, participated in the study. Advertisers were recruited by email via the Media Rakkers foundation, the Dutch branch of the international Media Smart programme. This foundation aims to increase children's advertising and media literacy through in-school education programmes, and is partly funded by the advertising industry. The social network of Media Rakkers includes many parties that have youngsters as their target group. Only advertisers who targeted their products and/or advertising practices to children under 18 years of age were included in the sample.

In the accompanying email, the topic of the survey was briefly introduced (i.e. advertisers' intentions with using certain persuasive tactics in

child-directed advertising) and instructions were provided. The advertisers then completed an online version of the survey, ticking a rank-ordering of the effects intended with each of the six tactics described above.

Children

A total of 209 children between the ages of 8 and 12 participated in the study (53% boys). The children were recruited from two elementary schools in urban and suburban areas in the Netherlands. These schools were not part of the Media Rakkers network nor did they participate in any advertising education programme. The children were grouped into four age ranges: 8–9 years (grade 3; 23.0%); 9–10 years (grade 4; 25.4%); 10–11 years (grade 5; 23.0%); and 11–12 years (grade 6; 28.7%).

Prior to the implementation of the survey among the children, institutional approval, parental consent and children's informed consent were obtained. The research took place in the schools' classrooms. After a short introduction by a female researcher about the nature and intent of advertising, the children completed a questionnaire about the six tactics and the associated intended effects. In grades 3 and 4, the researcher read each question and its response options aloud to the children. Before the questionnaires were administered, the experimenter emphasised that the test had nothing to do with formal grades or testing. Completing the questionnaire took about 30 minutes.

Adults

A sample of 96 adults with various socio-economic and cultural backgrounds participated in the study. They were recruited via email by using snowball sampling. The cover email contained information on the topic of the survey and provided participants with instructions. The mean age of the sample was 34.3 years ($SD = 13.77$; range = 19–69). Participants completed the same online survey on advertisers' intentions with using certain persuasive tactics in child-directed advertising as the advertisers.

Assessment of advertisers' intended effects

To measure advertisers' intended effects for each of the six tactics, advertisers were asked to rank five effects in order of perceived importance from *most intended* (1) to *least intended* (5). It is conceivable that the

intended effects depend on the type of product advertised. Because our study focused on the effects advertisers generally intend to elicit with certain persuasive tactics, we formulated questions in a general way. For each tactic, the following question was asked: 'When an ad [*tactic*], what kind of effect does an advertiser intend to bring about?' The six tactics were: (1) 'is often repeated' (ad repetition); (2) 'shows how a product works' (product demonstration); (3) 'shows kids who are playing with each other' (peer popularity appeal); (4) 'is funny' (humour); (5) 'shows a famous person or cartoon character' (celebrity endorsement); and (6) 'promises a freebie when purchasing a product' (premiums).

Based on the study by Boush *et al.* (1994), we selected five intended effects that advertisers could rank in order of importance. These were: (1) 'help children learn about the product'; (2) 'get children to recall the ad'; (3) 'get children to believe what the ad says'; (4) 'to make children like the ad'; and (5) 'to make children ask their parents for the product'. In Table 1, we present the mean ranking of intended effects for each tactic, as perceived by the advertisers. Because it is conceivable that several intended effects may be of equal importance for a specific tactic, a one-way repeated measures analysis of variance (GLM) was conducted for each tactic, to investigate if there was a significant difference among the rankings of the five intended effects. The ranking can be interpreted as follows. For example, the first column of Table 1 shows advertisers'

Table 1: Advertisers' ranking of intended effects for each advertiser tactic

Ad repetition <i>M</i> (SD)	Product demonstration <i>M</i> (SD)	Peer popularity <i>M</i> (SD)	Humour <i>M</i> (SD)	Celebrity endorsement <i>M</i> (SD)	Premiums <i>M</i> (SD)
Recall ¹ 1.18 (0.46)	Learn ¹ 1.12 (0.41)	Request ¹ 2.15 (1.13)	Like ¹ 1.21 (0.48)	Request ¹ 1.91 (1.06)	Request ¹ 1.15 (0.70)
Request ² 2.24 (0.65)	Request ² 2.79 (1.07)	Like ¹ 2.29 (1.22)	Recall ² 2.15 (0.61)	Recall ² 2.32 (1.04)	Recall ² 2.68 (0.94)
Learn ³ 3.21 (1.09)	Believe ² 2.94 (0.98)	Recall ² 3.12 (1.55)	Request ³ 2.76 (0.74)	Like ² 2.62 (1.04)	Like ² 2.76 (0.74)
Like ⁴ 4.03 (0.83)	Recall ³ 3.53 (0.90)	Believe ² 3.35 (0.98)	Learn ⁴ 4.35 (0.60)	Believe ³ 3.59 (1.40)	Learn ³ 4.09 (1.00)
Believe ⁴ 4.35 (0.85)	Like ⁴ 4.62 (0.74)	Learn ³ 4.09 (1.24)	Believe ⁴ 4.53 (0.61)	Learn ⁴ 4.56 (0.61)	Believe ³ 4.32 (0.81)

^{1,2,3,4} Column entries with different superscripts differ significantly at $p < 0.05$. Superscripts represent advertisers' ranking of the intended effects for each advertiser tactic

ranking of intended effects for ad repetition. The most intended effect for this tactic (indicated by superscript 1) was 'recall', followed by 'request' (superscript 2), and 'learn' (superscript 3). 'Like' and 'believe' were the least intended effects (superscript 4).

Measurement of child and adult understanding of advertisers' tactics

To measure children's understanding of advertisers' tactics, they were presented with the same questions as presented to advertisers, albeit adjusted to the cognitive level of children: (1) 'When an ad is often repeated on TV, why do you think the makers of that ad want you to see the same ad over and over?' (ad repetition); (2) 'When an ad shows how a toy works, why do you think the makers of that ad want you to see how the toy works?' (product demonstration); (3) 'When an ad shows kids who are playing together with a toy, why do you think the makers of that ad want you to see those kids?' (peer popularity appeal); (4) 'When an ad is very funny, why do you think the makers of that ad want it to be funny to you?' (humour); (5) 'When an ad shows a famous person or cartoon character, why do you think the makers of that ad want you to see that person or character?' (celebrity endorsement); and (6) 'When an ad promises a present, why do you think the makers of that ad want you to see that present?' (premiums).

Most earlier studies have measured children's advertising-related knowledge by asking them open-ended questions. For example, to assess understanding of advertising's intent, children were simply asked why commercials are shown on television (e.g. Robertson & Rossiter 1974; Donohue, Meyer & Henke 1978; Butter *et al.* 1981). However, some scholars have raised the concern that such open-ended questions may underestimate children's understanding, given their limited language and memory retrieval abilities (Macklin 1983). Therefore, a number of studies have used less cognitively demanding techniques, such as multiple-choice questions (Donohue *et al.* 1980; Macklin 1985, 1987; Bijmolt *et al.* 1998). These studies have noted considerably higher levels of understanding.

Taking into account 8- to 12-year-olds' language and memory retrieval capabilities, we used a relatively simple measurement technique to assess their perceptions of the intended effects – that is, we asked them to

choose from a number of predefined response options. Rather than asking them to rank-order the effects, we asked them to select one answer from the following set of response options: (1) 'To help me learn about the products in the ad'; (2) 'To get me to recall the ad'; (3) 'To get me to believe what the ad says'; (4) 'To make me like the ad better'; and (5) 'To make me ask my parents for the product in the ad'.

Adults' understanding of advertisers' tactics was measured with the same questions as presented to advertisers (see above). In order to be able to compare children's responses to those of adults, adults were also asked to choose from the list of five intended effects the one they believed was the effect most intended by advertisers.

For both children and adults, a scale for understanding of advertisers' tactics was constructed by comparing their answers with advertisers' ranking of intended effects. If respondents chose a first-place effect (most intended effect), their score increased by 4. If they chose a second-place effect, their score increased by 3; for a third-place effect by 2; and for a fourth-place effect (least intended effect) by 1. For example, if respondents chose 'recall' as the intended effect for the use of ad repetition, their score increased by 4. If respondents chose 'request' as intended effect their score increased by 3, if they chose 'learn', their score increased by 2, and if they chose 'like' or 'believe', their score increased by 1. In this way, for each tactic a score was created varying from 1 to 4, by which a higher score reflected a better understanding of advertising effects. A total mean score was computed by averaging the scores on all six tactics.

Results

The aim of this study was to investigate the development of children's understanding of advertisers' tactics and how this compares to an adult-like level. To investigate this, we conducted a univariate analysis of variance (GLM) with the total mean score for understanding advertisers' tactics as the dependent variable and age group (8–9 years vs 9–10 years vs 10–11 years vs 11–12 years vs adults) as a between-subjects factor. This analysis yielded a significant effect for age on understanding of advertisers' tactics, $F(4, 305) = 8.14, p < 0.001$. Post-hoc LSD tests showed that 8- to 9-year-old and 9- to 10-year-old children scored significantly lower than the older children and adults on understanding of advertisers' tactics. The

older children did not differ significantly from adults. As shown in Table 2, Hypothesis 1 was generally supported.

To investigate whether this pattern also held for each of the six tactics separately, we also conducted a multivariate analysis of variance (GLM) with the mean scores for understanding each tactic as the dependent variables and age group as a between-subjects factor. Because the previous analysis of variance showed that children's total understanding of advertising tactics significantly increases around age 10, we decided to group together the children in the two lowest grades and those in the two highest grades. The analysis yielded significant effects for age on ad repetition ($F(2, 305) = 9.42, p < 0.001$), product demonstration ($F(2, 305) = 8.10, p < 0.001$), peer popularity appeal ($F(2, 305) = 6.23, p < 0.01$), celebrity endorsement ($F(2, 305) = 5.10, p < 0.01$) and premiums ($F(2, 305) = 10.84, p < 0.001$). The analysis did not yield a significant age effect for humour ($F(2, 305) = 1.40, p = 0.25$). The mean scores for each tactic are presented in Table 3.

Table 2: Children's and adults' understanding of advertiser tactics

	Grade 3 (8–9 yrs) <i>M</i> (SE)	Grade 4 (9–10 yrs) <i>M</i> (SE)	Grade 5 (10–11 yrs) <i>M</i> (SE)	Grade 6 (11–12 yrs) <i>M</i> (SE)	Adults <i>M</i> (SE)
	<i>n</i> = 48	<i>n</i> = 53	<i>n</i> = 48	<i>n</i> = 60	<i>n</i> = 96
Total score	3.32 ^a (0.55)	3.31 ^a (0.46)	3.53 ^b (0.30)	3.50 ^b (0.33)	3.61 ^b (0.25)

^{abc} Row values with different superscripts differ significantly at least at $p < 0.05$

Table 3: Children's and adults' understanding of specific advertiser tactics

	Grade 3/4 (8–10 yrs) <i>M</i> (SE)	Grade 5/6 (10–12 yrs) <i>M</i> (SE)	Adults <i>M</i> (SE)
	<i>n</i> = 101	<i>n</i> = 108	<i>n</i> = 96
Ad repetition	3.05 ^a (1.25)	3.46 ^b (0.93)	3.65 ^b (0.71)
Product demonstration	3.30 ^a (0.77)	3.37 ^a (0.68)	3.66 ^b (0.54)
Peer popularity	3.47 ^a (0.58)	3.66 ^b (0.67)	3.75 ^b (0.46)
Humour	3.16 ^a (1.12)	3.21 ^a (1.12)	3.40 ^a (0.85)
Celebrity endorsement	3.35 ^a (0.90)	3.59 ^b (0.76)	3.25 ^a (0.71)
Premiums	3.55 ^a (0.75)	3.79 ^b (0.60)	3.94 ^b (0.28)

^{ab} Row values with different superscripts differ significantly at least at $p < 0.05$

Post-hoc LSD tests showed that the age at which children's understanding reached an adult-like level varied by the specific tactic under investigation. Product demonstration turned out to be most difficult to understand. The post-hoc analysis for product demonstration yielded no significant differences between the younger and older children, yet all children scored significantly lower than adults, indicating that even older children had not yet reached an adult-like understanding. Furthermore, children's understanding of ad repetition, peer popularity appeal and premiums reached an adult level at an earlier age. For these tactics, only 8- to 10-year-old children scored significantly lower than adults, implying an adult level from the age of 10. Finally, the post-hoc analysis for celebrity endorsement yielded an unexpected pattern – that is, 10- to 12-year-olds scored significantly higher than did adults, indicating that for this persuasive tactic, the older children displayed a better grasp of advertisers' intentions than did adults.

Discussion

To process advertising in a conscious and critical way, children need to fully understand the persuasive nature of advertising. To do so, they have to be aware that advertisers attempt to influence their responses to advertisements or the advertised products by using certain tactics. The aim of this study was to investigate the development of 8- to 12-year-old children's understanding of such tactics. We contributed to the existing body of knowledge on children and advertising by using expert (i.e. advertisers') views on the intended effects of persuasive tactics as a norm for correct understanding. In our view, the best way to get an accurate picture of the effects *advertisers* intend to elicit by using certain tactics is by asking advertisers themselves. After all, they are the ones who deal with these tactics on a daily basis. In addition, this study improved on earlier research by comparing children's understanding to a representative adult sample to provide a meaningful interpretation of child responses. Because research on children and advertising originates from the concern that children are more vulnerable to advertising effects than adults (Bandyopadhyay *et al.* 2001; Kunkel *et al.* 2004), the comparison between children and adults is central to research investigating the developmental progression in children's advertising literacy (Wright *et al.* 2005).

Overall, our results showed that, confirming our hypothesis (H1), children demonstrate a significant increase in their understanding of advertisers' tactics around 10 years of age. It is also around this age that children reach an adult level of understanding of advertisers' tactics (RQ1). The important shift around age 10 can be explained by the major changes that occur in children's socio-cognitive and information-processing capabilities around that age – more specifically, in their ability to take others' perspectives and to reason on an abstract level (John 1999; Gunter *et al.* 2005).

The developmental pattern observed in our study is in line with the pattern Rozendaal *et al.* (2010) found for the development of children's understanding of persuasive intent. They showed that, although children display a growing understanding of the selling intent of advertising as of age 8, their understanding of persuasive intent shows a considerable increase only around age 10. A possible explanation for this similarity in findings is that both types of advertising literacy are determined by the same socio-cognitive mechanism – that is, children's capability to consider others' (i.e. advertisers') perspectives. From this we may conclude that (a) children's understanding of persuasive intent and advertisers' persuasive tactics are, at least conceptually, related, and (b) the age of 10 marks an important shift in children's advertising literacy. Interestingly, in Rozendaal *et al.*'s (2010) study, children had still not acquired an adult-like understanding of advertising's selling and persuasive intent at age 12. This finding contrasts with the present study, in which we found that children reach an adult level of understanding advertisers' persuasive tactics around age 10. A possible explanation for this difference is that Rozendaal *et al.* (2010) used a university sample, which may have led to an overestimation of adult levels of understanding.

The 8- to 12-year-old children in our study appeared to have a better understanding of advertisers' tactics than the adolescents in Boush *et al.*'s (1994) study. A possible explanation for this difference is that, due to major changes in children's commercialised media environment over the past 15 years, they have become advertising literate at a younger age. Another explanation could be that the level of adults' advertising literacy in Boush *et al.*'s (1994) study was higher than in ours, because their adult sample consisted of university students. As might have been the case in Rozendaal *et al.*'s (2010) study, a university sample could have resulted in an overestimation of adult levels of understanding.

In addition to this overall pattern, we also looked at children's understanding of the six persuasive tactics separately. Our findings demonstrated that the age at which children reach an adult level of understanding differs considerably by the tactic under investigation. Children's understanding of ad repetition, peer popularity appeal and premiums reached an adult level from the age of 10. However, product demonstration turned out to be the most difficult to understand, and all children scored significantly lower than adults. A possible explanation is that children's and adults' responses vary because their goals for watching advertising are different. While adults look at commercials, partially, for information purposes, children watch them primarily for pleasure. They are less orientated towards the functionalities and more towards the enjoyment an advertised product may offer (see Derbaix & Bree 1997; Moore & Lutz 2000). Finally, the results showed that, for celebrity endorsement, 10- to 12-year-olds displayed a better grasp of advertisers' intentions than did adults. One explanation might be that children today are more exposed to celebrities in their media and commercial environment (e.g. supermarket) than they were 15 to 20 years ago. Another explanation is that the intended effects for using celebrity endorsement differ for child- and adult-directed advertising – that is, in child-directed advertising, celebrities or cartoon characters are primarily used to influence their recall and liking of, and ultimately their request for, the advertised product (see Table 1), while in advertising directed at adults the main aim of this tactic is to increase the credibility of the persuasive message (Erdogan 1999).

Overall, the differential findings for various tactics are in line with the persuasion knowledge model of Friestad and Wright (1994). In their model they discuss a key event named 'change of meaning', which is the moment a child first realises that some aspects of an advertising message are not 'simply there', but may be an advertiser's intentional attempt to persuade them. According to Friestad and Wright, the moment these change-of-meaning realisations occur may depend not only on the capacities of the child, but also on the specific tactic used. Further research is needed to systematically investigate how children's understanding varies by tactic and by type of intended effect.

Suggestions for future research

Our study was the first to examine 8- to 12-year-old children's understanding of advertisers' tactics, and can provide a starting point for further research. We conclude with some suggestions for future research to expand and improve on the present study. First, similar to the study of Boush *et al.* (1994), the focus of this study was on children's and adults' conceptual understanding of advertisers' tactics. That is to say, the understanding of advertisers' tactics was measured at a general level. Future research could measure the understanding of advertisers' tactics at a more specific level by exposing children and adults to advertisements employing these tactics.

It is possible that research into the understanding of advertisers' tactics at a specific level may result in a different developmental pattern than the one that was found in our study. According to Roedder (1981), 8- to 12-year-old children need a cue to activate their stored knowledge. Assuming that advertising exposure functions as a cue to activate their advertising knowledge, research at a specific level could result in higher levels of understanding. However, it is also conceivable that the advertised product or brand is so appealing to children that they (consciously or not) fail to apply their advertising knowledge. Following this line of reasoning, research at a specific level could yield lower levels of understanding. Future research could test these conflicting hypotheses.

Second, although we have attempted to optimise existing research measures, our results may still be affected by the measurement used. In order to get an even more accurate picture of the development of children's advertising literacy, future research could use an integration of different research methods (Owen *et al.* 2007). Third, because this study was conducted in the Netherlands only, the results may not be generalisable to other countries. Even though children's commercial culture has become increasingly globalised in the past decades, there are substantial differences in regulatory policies regarding child-directed advertising between countries, which may affect the nature of advertising messages and the experience of respondents. More cross-cultural research is needed to generate deeper insight into the role of regulatory culture in children's understanding of advertisers' persuasive tactics.

Fourth, we focused on tactics in television advertisements because our aim was to expand on the existing literature, which mostly focused on the understanding of television advertising. However, important changes have taken place in children's media environment, and advertisers have new advertising venues at their disposal (Moore 2004; Calvert 2008). Advertisers are rapidly adopting new advertising practices (e.g. branded websites, product placement in games), which are fundamentally different from traditional advertising and pose new challenges for young people's advertising processing. It is likely that children will have greater difficulty recognising and understanding these more embedded forms of advertising practices and tactics. Therefore, future research needs to compare advertising tactics in different advertising venues.

Finally, future research should address the question of whether children's understanding of advertisers' tactics relates to their ability to critically process advertising messages. It has been suggested that even when children possess the necessary advertising-related knowledge, they may fail to actually use this while exposed to advertising (Brucks *et al.* 1988; John 1999; Moses & Baldwin 2005; Nairn & Fine 2008). Although the relationship between children's advertising literacy and their susceptibility to advertising effects is widely taken for granted, little research has investigated it (Livingstone & Helsper 2006). Future research should explicitly test the relationship between understanding of persuasive tactics and advertising effects, including attitude towards the ad (Aad), attitude towards the brand (Ab), and purchase intent (PI; see Phelps & Hoy 1996; Derbaix & Bree 1997).

Practical implications

From a public policy perspective, the findings of this study may help policy makers to formulate restrictive or regulatory policies concerning child-directed advertising. More specifically, our findings may prove useful in advancing industry self-regulation by enhancing the current insight in children's ability to understand certain persuasive tactics. For example, existing policies are heavily based on the belief that the age of 8 marks an important shift in children's advertising literacy. However, based on our findings, we argue that the age of 10 is a more appropriate criterion for policy decisions. Before this age, most children have not yet acquired an adult

level of some crucial components of advertising literacy (i.e. understanding advertising's persuasive intent, understanding advertisers' tactics).

In addition, our findings may provide input to advertising education programmes focusing on skills in identifying and understanding persuasive tactics in advertising messages. Showing children examples of commercials containing certain persuasive tactics and explaining to them why those tactics are there may advance the moment 'change of meaning' occurs (cf. Friestad & Wright 1999) – that is, the age at which children come to realise that some aspects of an advertising message (e.g. a couple of happy children playing with the advertised product) are intentional attempts of advertisers to persuade them. This realisation may fundamentally alter children's responses to advertising messages. In conclusion, to warrant a fair commercial environment for children, it is of great importance for policy makers to base their policies concerning children and advertising on scientific insights in children's development of advertising literacy.

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