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Online advertising to children & teenagers: Perspectives of youngsters, advertisers and parents

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Chapter 1

Introduction

Chapter 1 Introduction

1 Context and relevance

“Playing hide and seek?”

During the last decades, the media landscape has transformed and expanded under the influence of digitalisation and the mobility of media devices. Compared to a couple of decades ago, where the average household only used print media (newspapers, magazines), radio and traditional television, nowadays the average household is equipped with a variety of media devices including traditional media, but also mobile devices such as laptops, smartphones and tablets that are connected to the online world. As a consequence, people’s media use has changed.

Both children and teenagers are heavy users of online media (Common Sense Media, 2017a, 2017b; Ofcom, 2017). In the United Kingdom, 79% of the children between 5 and 7 years old and up to 94% of the children between 8 and 11 years are active online (Ofcom, 2017). Moreover, children increasingly engage in online activities by means of mobile media (Common Sense Media, 2017a; Ofcom, 2017). The average American child younger than 9 spends 48 minutes per day on a mobile device, and this number has tripled since 2015 (Common Sense Media, 2017a). In the UK, teenagers between 12 and 15 years old spend on average 21 hours per week online, and use their mobile phone 18 hours per week (Ofcom, 2017). In Flanders (Belgium), the context of this dissertation, youngsters’ media use follows the same pattern. The most popular media device among Belgian teenagers (12-18 years) is the mobile phone, with 92% possessing their own (Apestaartjaren, 2016). Almost 58% have their own laptop, and 41.6% have their own tablet. Belgian children between 9 and 12 years use their mobile devices (tablet, smartphone and laptop) mostly to play games or to use applications (Apestaartjaren, 2016). 67.5% of Belgian teenagers play games at least once a day during schooldays. In weekends this number increases to 80%, with more than 50% of them playing games for more than two hours (Apestaartjaren, 2016). Among older teenagers (15-19 years), the smartphone is king with 69.3% watching video content on this media device on a daily basis, compared to 54.2% who daily watch video on television (Vanhaelewyn & De Marez, 2017). The smartphone is reported as the most preferred and most indispensable media device within this age group, and 61.6% of them use at least two different media devices to watch

video content (Vanhaelewyn & De Marez, 2017). These numbers illustrate the extensive use of mobile devices and the importance of online media consumption in both children and teenagers lives.

As the media landscape changed, the advertising industry saw opportunities to expand its working territory to online media and mobile devices. Advertisers took advantage of the constant online connectivity of media users by adjusting their advertising messages and campaigns to it (Moore, 2004; Rideout, 2014). As a consequence, advertising lurks around every corner and is literally present everywhere, on offline, online and mobile media. As today's children and teenagers have grown and are growing up in a world dominated by online media, they encounter advertising messages on various – and increasingly online – media, and advertising is ubiquitously present in their lives (Clarke & Svanaes, 2012; Common Sense Media, 2017b; Owen, Lewis, Auty, & Buijzen, 2013). Advertisers specifically target their advertisements directly to youngsters whom they consider as a specific, relevant and important target group as they are the consumers of tomorrow. Moreover, children and teenagers are considered to have an impact on the shopping and consumption activities of their family, and advertisers want to print their brands and products in consumers' mind at the earliest stage possible (Buckingham, 2009). As a result, enormous budgets have and are being spent to target youngsters. For instance, it is estimated that the digital advertising market for advertising aimed at children will reach \$1.2 billion by 2019 (PWC, 2017). This shows advertisers' dominant position in the online world and the importance of youngsters as a target group for advertisers and marketers.

2 The AdLit-project

This dissertation is part of the 4-year interdisciplinary AdLit research project funded by the Flemish government, that focusses on advertising literacy and the empowerment of children and teenagers to cope with advertising they encounter to become well-informed critical consumers. The focus of the project is on online, contemporary advertising formats.

Four Belgian universities (Ghent university, University of Antwerp, KU Leuven and Vrije Universiteit Brussel) collaborated on this project. The project was supported by various stakeholder groups ranging from consumer organisations, family organisations, groups from the educational field to commercial stakeholders such as advertisers. Six PhD students in four different domains (communications sciences, marketing, educational sciences, law) worked on

the project. The doctoral students from communication sciences focussed on the effects of advertising formats either on the ad responses of children (Ghent University), teenagers (University of Antwerp) or children with a low socioeconomic status (Vrije Universiteit Brussel). Researchers from Ghent University and the University of Antwerp examined the potential effect of an advertising cue in improving the activation of persuasion knowledge of children and teenagers. Researchers from the educational sciences (Ghent University) developed educational packages with a focus on various advertising formats, particularly online integrated advertising formats. The law faculty of the KU Leuven investigated the existing legal rules and self-regulatory guidelines concerning the current advertising landscape and advertising strategies aimed at children. The current dissertation contributes to the AdLit-project in that it focusses on different stakeholders involved with the topic, i.e. children and teenagers themselves as target groups for advertising and two key stakeholder groups: advertising professionals and parents, and also contributes to developing advertising campaigns to enhance children and teenagers' advertising literacy.

In line with the contribution of this dissertation to the AdLit-project, the main objective of this dissertation is to study the effects of online contemporary advertising formats on children and teenagers. How are youngsters persuaded by these advertising formats and how do they react when being exposed to these commercial messages? This objective will be explored from different angles by investigating several actors involved: children and teenagers as target groups of contemporary advertising and two stakeholder groups: advertising professionals and parents. The focus of the studies in the dissertation is on young teenagers and special attention will also be given to the differences between age groups: children (6-12 years) and teenagers (13-18 years). Additionally, we will explore how we can reach youngsters to inform and educate them about contemporary advertising tactics in order to make them advertising literate consumers.

The next section explains how contemporary online advertising formats differ from traditional ones. These formats will be used in the empirical chapters of this dissertation. Subsequently, the objectives, contributions and research questions will be described. This is followed by an overview of the theoretical frameworks used throughout the chapters of this dissertation. Finally we give a brief overview of the different chapters.

3 Integration, interactivity and the collection of personal data as features of contemporary online advertising

Contemporary (online) advertising differs from traditional advertising formats (e.g. television and radio advertising), in that it is characterised by three important features: integration and/or interactivity (Blades, Oates, Blumberg, & Gunter, 2014; Calvert, 2008; Kunkel et al., 2004; Moore & Rideout, 2007) and the collection of personal data to personalise advertising (Boerman, Kruikemeier, & Zuiderveen Borgesius, 2017; Cai & Zhao, 2010, 2013; Tucker, 2014; Walrave & Heirman, 2013).

Integrated advertising is advertising that embeds a commercial, persuasive message into informative or entertaining content (Buijzen, van Reijmersdal, & Owen, 2010; Calvert, 2008). As a result, the lines between media content and advertising become blurred as the commercial message itself cannot be skipped by the viewer, the reader or the Internet surfer without losing programme content (Blades et al., 2014; Buijzen et al., 2010; Calvert, 2008). The strategy behind integrated advertising is that advertising is most effective when the consumer does not recognise it as advertising (Calvert, 2008). Indeed, this advertising practice elicits a challenge for the media consumer to recognise the commercial content within the media content and to understand the commercial and persuasive intent of the message (Wojdyski & Evans, 2016). In-game advertising (IGA), ‘*the inclusion of products or brands within a game*’ (Terlutter & Capella, 2013 p. 95) is an example of integrated advertising. Another example of integrated advertising is native advertising, defined as ‘*the practice by which a marketer or advertiser borrows from the credibility of a content publisher by presenting paid content with a format and location that matches the publisher’s original (nonpaid) content*’ (Wojdyski & Golan, 2016 p. 3). Specific forms of native advertising are sponsored posts, articles, videos, or links on websites, social networking sites or search engines that resemble non-paid media content (Wojdyski & Golan, 2016).

Interactivity refers to the level of interaction or activity consumers can have with an advertising message instead of being passively exposed to it (Liu & Shrum, 2002; Montgomery & Chester, 2009; Montgomery, Grier, Chester, & Dorfman, 2011). Marketers design advertising campaigns that use the constant online connectivity and interactivity of (young) people, their multi-tasking, and the fluency of their media use. Interactive advertising tries to stimulate interaction and engagement with a brand or product instead of being passively exposed to it, for example by creating an experience with the product or brand (e.g. branded websites or brand

applications) (Chen, Zhu, Xu, & Zhou, 2013; Liu & Shrum, 2002; Montgomery & Chester, 2009; Rideout, 2014). An example of an interactive advertising format is an online clickable banner, as clicking on the banner makes it possible to interact with the advertised brand.

Integration and interactivity as advertising features are not mutually exclusive, and advertising can be both integrated and interactive. An adverggame, *‘a game which is designed and created to promote an existing brand, product, service or idea and which contains branded information such as a brand logo, brand characters or an advertising message’* (Terlutter & Capella, 2013 p. 96) has both integrated and interactive features. Often the branded elements are focal to the brand, which results in branded games aimed at children. Interactivity enhances engagement and entertainment. For a child it is harder to recognise integrated commercial messages compared to a traditional 30-second spot that is easy to identify as advertising as it appears in between different parts of a programme (often without a link to the programme) and has a shorter duration time than the programme itself (Owen, Lewis, & Auty, 2014; Terlutter & Capella, 2013; Youn & Lee, 2012). Interactive context, such as adverggames, is perceived as playful and enjoyable by children (Mallinckrodt & Mizerski, 2007; Raney, Arpan, Pashupati, & Brill, 2003). However, as children are focused on playing the game this might lead to an inability to distinguish the commercial message from the game and comprehend the persuasive intent behind the game (Mallinckrodt & Mizerski, 2007; Terlutter & Capella, 2013; van Reijmersdal, Rozendaal, & Buijzen, 2012).

Advertisers search for new ways to make their advertising messages stand out in the ad clutter (Bright & Daugherty, 2012). Technological developments have given advertisers the opportunity to collect, analyse information about the target audience and use it in personalised advertising (Barreto, 2013; Bright & Daugherty, 2012). Contemporary online advertising formats often have the additional purpose of gathering personal information from the receiver of the advertising message by persuading individuals to disclose their data by having them register or create an account on a website or application (Cai & Zhao, 2013), or by tracking media users’ online activities by means of ‘cookies’. Cookies are small text files that are put on users’ devices, such as computers or smartphones (Smit, Van Noort, and Voorveld 2014, Your Online Choices 2009). Cookies make it possible for a website to recognise the preferences of an individual surfing on the Internet (Your Online Choices 2009). They can facilitate the functionality of a website or can collect profile information for targeted advertising (tracking cookies) (Smit, Van Noort, and Voorveld 2014). Subsequently, this data may be used to customise future advertising campaigns, such as online behavioural targeting defined as *‘the*

practice of monitoring people's online behaviour and using the collected information to show people individually targeted advertisements' (Boerman et al., 2017 p. 2). In this way advertising is tailored to the consumer's characteristics, interests and preferences. However, this advertising technique raises privacy concerns, especially if children and teenagers are the target group, as they are considered to be more susceptible to the effects of data collection, because they might disclose their personal data without prior parental consent and might not be aware of the purposes their data is used for (Cai & Zhao, 2013; Federal Trade Commission, 2012; Heirman, Walrave, & Ponnet, 2013; Rozendaal, Buijzen, & Valkenburg, 2010; Steeves, 2006; Walrave & Heirman, 2013).

4 Objectives, contributions and research questions

The main objective of the dissertation is to study the impact of online contemporary advertising formats on youngsters. This will be investigated from different angles by investigating several actors involved: children and teenagers, advertising professionals and parents.

We offer several contributions. First, the dissertation explicitly focuses on the effect of contemporary online, integrated and/or interactive contemporary advertising formats aimed at children and teenagers. Literature on advertising aimed at youngsters and parental mediation has often focused on traditional advertising formats (e.g. television advertising) (Andronikidis & Lambrianidou, 2010; Buijzen & Valkenburg, 2003; Opgenhaffen, Vandenbosch, Eggermont, & Frison, 2012; Roedder, 1981; Spielvogel & Terlutter, 2013; Valkenburg, Krmar, Peeters, & Marseille, 1999). As nowadays children are specifically targeted by advertisers by means of contemporary online advertising formats (Calvert, 2008; Moore, 2004), it is relevant to investigate the effects of this type of advertising.

Second, the dissertation investigates contemporary advertising formats aimed at children and teenagers from the perspective of three different stakeholders: the youngsters themselves, advertising professionals and parents. Advertisers are key stakeholders in the debate. They are in charge of deciding whom they will target and which tactics they will use. However, so far they are an under-researched group in academic literature on advertising practices aimed at youngsters (Geraci, 2004), and especially with respect to interactive and/or integrated online advertising formats. Therefore it is important to take the perspectives of advertising professionals into account. Parents are considered to guide their children's media consumption and consequently their advertising exposure. Hence, they play an important role in educating

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their children about advertising's intentions and protecting them from unwanted advertising effects. Parental mediation studies in the context of contemporary advertising are very scarce. Investigating parents' point-of-view in this context is thus very relevant as well.

Third, apart from systematically distinguishing children (6-12 years) and teenagers (13-18 years), there is a specific focus on youngsters between 10-14 years old. The majority of academic literature on advertising aimed at children and teenagers has mainly focuses on either younger children (between 5 and 12 years old) (Mallinckrodt & Mizerski, 2007; Owen et al., 2013; Panic, Cauberghe, & De Pelsmacker, 2013; Slot, Rozendaal, van Reijmersdal, & Buijzen, 2013) or older teenagers (between 14 and 18 years old) (Kelly, Kerr, & Drennan, 2010; Zarouali, Ponnet, Walrave, & Poels, 2017), while few studies have investigated young teenagers (10-14 years) (Vanwesenbeeck, Walrave, & Ponnet, 2016; Verhellen, Oates, De Pelsmacker, & Dens, 2014). This age bracket is crucial. Traditional theories about the development of advertising literacy (see hereafter) assume that, by the age of 12, youngsters have developed the same level of advertising literacy as adults (Friestad & Wright, 2005; John, 1999; Moses & Baldwin, 2005; Roedder, 1981). However, it might be assumed that with respect to integrated and/or interactive advertising formats, this assumption is less plausible, and existing theories about advertising literacy and persuasion knowledge in youngsters have to be updated (Evans & Park, 2015; Panic et al., 2013; Vanwesenbeeck et al., 2016; Verhellen et al., 2014).

Fourth, the insights from both youngsters, advertising professionals working with or for youngsters, and communication professionals were combined to generate ideas about the main tactics and elements that should be used in future awareness campaigns on advertising literacy in order to be effective. This type of research has received scant attention in literature, especially in the field of advertising literacy.

Fifth, the findings covered throughout the studies in this dissertation provide valuable insights and might function as an eye-opener to both public authorities and the advertising industry. Both instances can learn what the effects of contemporary advertising formats on youngsters are, how susceptible this target group is to advertisers' persuasive strategies, what can and should be done to protect youngsters from these advertising effects and to enhance their advertising knowledge.

Finally, this dissertation uses a multi-method approach by applying several different methods. A combination of both quantitative methods such as experiments (chapter 2 and chapter 3) and surveys (chapter 4 and chapter 5), and qualitative methods such as in-depth interviews (chapter 4) and co-creation workshops were used (chapter 6).

Specifically, we try to answer the following research questions:

RQ 1: What are the effects of integration and interactivity as advertising features on young teenagers' brand memory, brand attitude and their sharing of personal information, and how is this mediated by awareness of selling intent and critical processing?

RQ 2: What is the effect of personalised advertising on youngsters' awareness of selling intent and word-of-mouth intention, and what is the moderating role of youngsters' age and an advertising cue?

RQ 3: What are the perceptions of Belgian advertising professionals regarding the ethical appropriateness and the use of contemporary advertising formats towards children and teenagers?

RQ 4: Which parental mediation strategies do parents use to mediate their children's media use and advertising exposure, and what are their perceptions towards the ethical appropriateness of contemporary advertising formats?

RQ 5: Which are the best media contexts to reach youngsters to spread an awareness campaign on advertising literacy, and which elements should be included in this campaigns to generate positive results?

5 Theoretical frameworks

This section gives an overview of the most important theoretical frameworks used in the studies.

5.1 The Persuasion Knowledge Model

The *Persuasion Knowledge Model (PKM)* (Friestad and Wright, 1994) describes how individuals develop and use three different knowledge structures in order to be able to cope with advertisers' and marketers' persuasive tactics, namely: agent knowledge, topic knowledge

and tactic knowledge (Friestad & Wright, 1994). Agent knowledge describes the beliefs about the goal of the persuasive agent (e.g. the advertiser, the marketer). Topic knowledge is the knowledge the receiver has about the topic of the persuasive message (e.g. knowledge about a product). Tactic knowledge describes the knowledge about the persuasive tactics used (e.g. integration or personalisation of an advertising message). Persuasion knowledge is the interaction between these three knowledge structures. When confronted with a persuasive attempt of, for instance, an advertiser or a marketer, this persuasion knowledge might be activated and a person will try to cope with the persuasive attempt. A crucial moment in the development of persuasion knowledge is the ‘change of meaning’ (Friestad & Wright, 1994; Wright, Friestad, & Boush, 2005). This event occurs if a person (usually a youngster) comprehends for the first time the action and the underlying purposes of advertising. At this moment (s)he realises that the commercial message is not just present, but other intentions are lying beneath the surface (Wright et al., 2005). Activation of persuasion knowledge might lead to critical processing of the commercial message, which in turn might negatively affect the attitude towards the persuasive agent and attitudes towards the topic (Boerman, van Reijmersdal, & Neijens, 2012, 2014; Friestad & Wright, 1994). However, coping with a persuasive attempt of an advertiser does not necessarily lead to a critical response. The Persuasion Knowledge Model describes ‘coping’ as a neutral behaviour (and this is thus not only limited to negative responses) (Friestad & Wright, 1994). Coping might thus also refer to accepting the persuasive attempt without processing the persuasive message in a critical manner as the targets of the persuasive attempts strive to reach their goals. These goals might be searching information about a product or looking for entertainment, which are positive effects of advertising as it provides us with these objectives. Persuasion knowledge develops gradually throughout childhood depending on age related cognitive skills and experience with persuasive attempts (John, 1999; Wright et al., 2005). The following paragraph describes this development more in depth. The Persuasion Knowledge Model (Friestad & Wright, 1994) is used as one of the main theoretical frameworks in chapters 2 and 3.

5.2 Children's consumer socialisation and their development of persuasion knowledge

Advertising aimed at children has been a subject of debate among advertising practitioners, scholars, parents and policy makers for decades, as children are seen as very susceptible to advertising effects and advertisers' strategies and techniques. The origin of this debate lies in children's cognitive development and their skills and experience with respect to advertising, which are limited compared to those of adults. To fully understand advertising, an individual has to acquire two skills; (1) one has to be able to identify advertising and to distinguish it from editorial or entertaining contexts, and (2) one has to comprehend the commercial and persuasive intentions and techniques of the advertising format (Brucks, Armstrong, & Goldberg, 1988; Moses & Baldwin, 2005; Rozendaal et al., 2010; Vanwesenbeeck et al., 2016).

Both social and cognitive factors affect the development of persuasion knowledge (Roedder, 1981). Experiences and interactions with other persons refer to social factors. For instance, a person can discuss advertising and its persuasive intentions with family and friends. Parents might, for example, discuss television advertising with their children. These discussions might provide children with insights on the perspectives and intentions of others (e.g. advertisers' selling intent). Cognitive factors relate to the information processing skills and knowledge development of an individual. These factors depend on information storage and retrieval abilities, which are in turn related to age. Roedder (1981) classifies children into three different groups of processors based on their skills to process information. Children younger than 8 are '*limited processors*', this group has not fully obtained information storage 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. For example, an advertising cue that clearly announces that a given message is advertising helps them to identify the message as advertising and might activate their advertising knowledge. Teenagers from the age of 13 years onwards are '*strategic processors*'. This group does not need a cue to retrieve stored information. For instance, this group recognises advertising without the presence of a cue.

This classification is used further in consumer socialisation theory by John (1999), by integrating insights of consumers' cognitive development. Children's consumer socialisation consists of a sequence of three cognitive stages, each referring to a different age group: the perceptual stage (3-7 years), the analytical stage (7-11 years) and the reflective stage (11-16 years) (John, 1999). In the *perceptual* stage children are able to distinguish advertising from

other media content by means of perceptual cues only (e.g. they notice that the traditional 30-second spot on television has a shorter duration than the television programme). In the *analytical* stage, children combine different sources of information, instead of relying on perceptual cues only. Children belonging to the analytical stage are able to understand that the goal of advertising is to sell products. Only from the *reflective* stage onwards children 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).

Integrated and interactive advertising makes the identification of an advertisement harder. As a result, the activation and retrieval of persuasion knowledge might be hampered (An, Jin, & Park, 2014; Verhellen et al., 2014). Contemporary advertising formats are thus perceived as being more likely to persuade the message receiver unconsciously, while the individual is not aware of the commercial and persuasive purpose of the message. This raises ethical concerns, especially when this type of advertising is targeted at children and teenagers whose cognitive skills might not be fully developed yet and whose advertising experiences are limited compared to those of adults. Furthermore, the integrated and interactive characteristics of these advertising formats raise ethical questions concerning the appropriateness of the use of these advertising formats towards these target groups. Children have been found to be more susceptible to the effects and unconscious persuasion of contemporary advertising formats compared to traditional advertising formats. Tactics such as personal data collection and personalisation of advertising lead to privacy concerns (Cai & Zhao, 2013; Federal Trade Commission, 2012; Nairn & Fine, 2008; Steeves, 2006; Walrave & Heirman, 2013). These issues and concerns put forward a necessity for an update or extension of the traditional consumer socialisation framework with online integrated and/or interactive advertising formats (Evans & Park, 2015; Panic et al., 2013; Vanwesenbeeck et al., 2016; Verhellen et al., 2014). Children's consumer socialisation theory and theories concerning their persuasion knowledge development will be used in each chapter of this dissertation (chapter 2, 3, 4, 5 and 6) as a theoretical framework to investigate youngsters' advertising knowledge, or to make an explicit difference between youngsters belonging to different age groups.

5.3 Limited Capacity Models

Contemporary advertising formats simultaneously expose individuals to commercial and non-commercial stimuli. Limited capacity models describe how information in different media contexts might be processed and which role attention plays in this processing. Each of these models thus focuses on another factor. The models provide an overview of different factors and their interplay in processing advertising messages and information given in these advertisements. As contemporary advertising formats are characterised by integration and interactivity, these models are relevant theoretical frameworks to start from when investigating the effect of contemporary advertising formats on youngsters' ad responses. Both the Limited Capacity Model of Mediated Message Processing (Lang, 2000) and the Limited Capacity Model of Attention (Kahneman, 1973) state that an individual's cognitive resources are limited, which leads to a limited capacity to process the information one is exposed to. If a certain task requires more cognitive capacity than available, the information will not be fully processed (Lang, 2000). If different tasks require information processing at the same time, the primary or most prominent task will get most cognitive resources or attention (Kahneman, 1973). For instance, if a billboard ad is integrated into a game, the primary task of the game-player will be the game play itself. Processing information in the background of the game will be subordinated to this primary task. The work of Campbell and Kirmani (2000) is related to these models and states that consumers' persuasion knowledge activation depends on the available cognitive capacity. Contemporary advertising messages are often 'hidden' in other content. Persuasion knowledge's activation thus needs extra cognitive capacity to understand that a particular message is not simply part of the content, but that there is indeed a particular motive or purpose attached to the message.

The theory about the development of consumer socialisation in children is based on traditional advertising (e.g. television advertising). However, the features of contemporary advertising formats make it harder to distinguish advertising formats from media content (Owen et al., 2014; Panic et al., 2013; Verhellen et al., 2014). The limited cognitive skills of youngsters makes cognitive capacity considerations important in the context of contemporary advertising formats. Limited capacity models are used in chapter 2.

5.4 Parental mediation strategies

Parental mediation strategies are ‘*any strategy parents use to control, supervise or interpret (media) content for children and adolescents*’ (Warren, 2001 p. 212). Concerns about negative effects, risks and dangers from media and advertising (Nikken & Jansz, 2006; Sonck, Nikken, & de Haan, 2013; Warren, 2001) are at the origin of parental mediation. Parents can use several mediation strategies to guide and mediate their children’s media use and protect them from negative or harmful advertising effects (Clark, 2011). Literature has distinguished three parental strategies: *restrictive* mediation (setting rules and regulations), *active* mediation (also called instructive mediation, discussing media and/or advertising content) and *co-viewing* (watching/using media together without engaging in a discussion about the content) (Clark, 2011; Nathanson, 2001; Nikken & Jansz, 2014; Valkenburg et al., 1999). As advertising is present on all different types of media, children’s media use is intrinsically linked to advertising exposure. As the majority of research on parental mediation has focused either on television (advertising) (Bijmolt, Claassen, & Brus, 1998; Buijzen & Valkenburg, 2005; Fujioka & Austin, 2003; Opgenhaffen et al., 2012; Watkins, Aitken, Robertson, & Thyne, 2016) or on online media (online advertising) in general (Clark, 2011; Kirwil, 2009; Nikken & Jansz, 2014; Sonck et al., 2013; Spiteri Cornish, 2014), it is relevant to study parental mediation with a focus on contemporary media devices (such as television, personal computer, mobile phone and tablets) and advertising encountered on these media devices (Nelson, Atkinson, Rademacher, & Ahn, 2017). Parental mediation strategies are addressed in chapter 5 to investigate which mediation strategies parents use to guide their children’s media use and advertising exposure.

5.5 Advertising professionals’ ethical behaviour

Advertising towards children is often perceived as unethical. However, as youngsters are a highly targeted group, it is interesting to explore how advertising professionals themselves perceive this issue. If advertisers would perceived their practices unethical, one can assume that they would not engage in them. With respect to advertisers’ ethical decision-making, different principles exist, each varying in the degree to which the consumers’ or message receivers’ interests are protected (De Pelsmacker, Geuens, & Van den Bergh, 2017; Pickton & Broderick, 2005). Advertisers might rely solely on the law as a benchmark of what is ethical (‘caveat emptor’ principle). ‘Ethical codes’ go further by applying standards that are more strict than legislation (e.g. The Belgian Pledge - a self-regulatory initiative to commit to rules and guidelines set as a standard for advertising to youngsters; (The Belgian Pledge, 2017)). Other

approaches take consumers' vulnerability, their access to information and their choice into account ('consumer sovereignty'), while the ultimate approach strives for maximisation of the wellbeing of consumers ('caveat venditor' principle). Do advertisers rely on legislation only, or are they following self-regulation initiatives? Chapter 4 reflects on advertisers' perceptions concerning the ethicality and appropriateness of contemporary advertising formats targeted at youngsters.

5.6 Co-creation

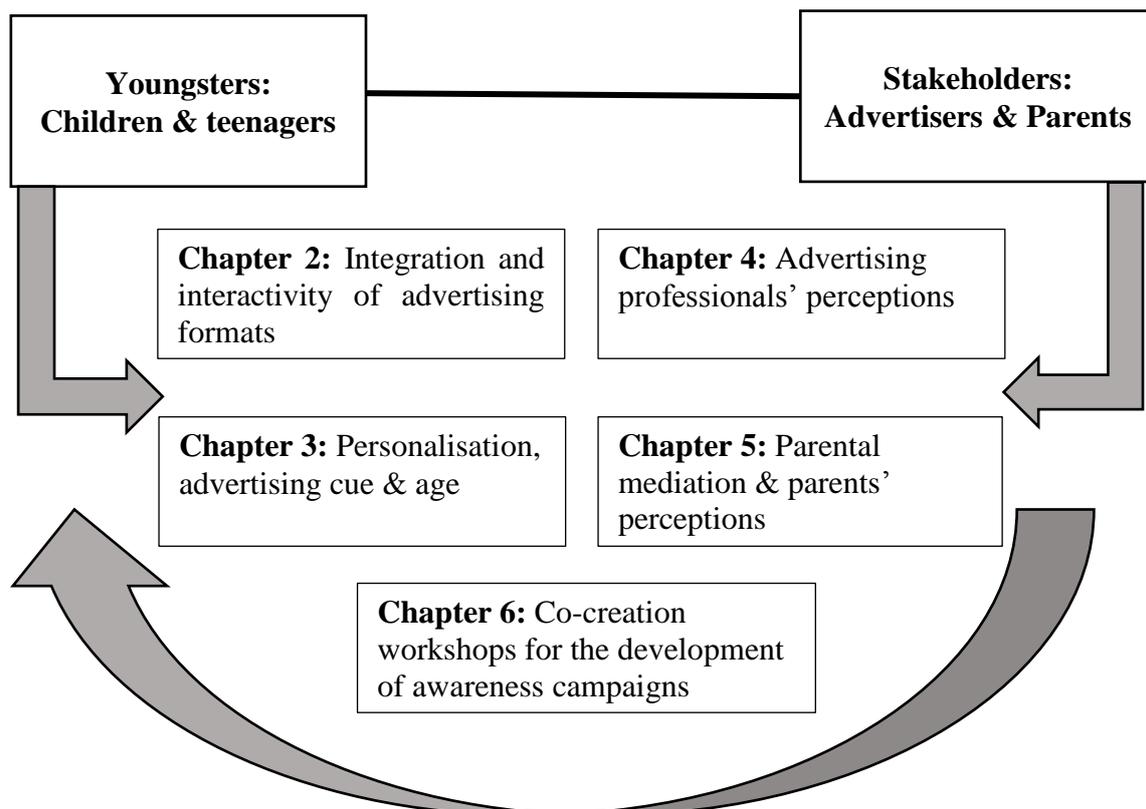
Co-creation methodology (techniques from product design sciences) is applied in an advertising context to explore which media context and campaigns work best to reach children and teenagers with an awareness campaign. Sanders and Simons (2009) define co-creation as 'any act of collective creativity that is experienced jointly by two or more people' (p. 2). A typical co-creation process consists of four phases, referred to as the '*double diamond*' process: discover, define, develop and deliver (Design Council, 2005, 2012). The 'discover' phase is exploratory and aims at discovering insights, inspiration, defining user needs and initial ideas. The second stage ('define') represents the convergent stage. Ideas and findings discovered in the first stage are analysed and structured in order to come to a reduced set of ideas. The last stages are the 'development' of the generated ideas in the first two stages, followed by the 'delivery' of the final 'product'. Co-creation is used as a methodology in chapter 6 to explore the elements that should be used to reach children and teenagers effectively when developing awareness campaigns on advertising literacy. The focus lies on the inspirational phase, i.e. the first (discover) and second stage (define) of the double diamond process, to generate information about the specific target group in order to create conceptual versions of the campaign in the next stage of the design process.

6 Structure of the dissertation

The dissertation consist of five chapters presented as stand-alone empirical papers. The next two chapters investigate the effect of integrated and/or interactive online advertising formats and advertising cues on *youngsters'* ad responses. The fourth chapter focuses on *advertising professionals'* perceptions of contemporary advertising formats aimed at children and teenagers. *Parents'* mediation strategies and their concerns with respect to the use of advertising formats aimed at children and teenagers is investigated in the fifth chapter. The sixth and final chapter describes the exploratory idea generation process for the development of advertising

literacy awareness campaigns targeted at youngsters, by means of co-creation workshops with youngsters and professionals from various industries related to youth and advertising. A brief description of the objective and method(s) of the separate studies in each chapter of this dissertation is provided in the following paragraphs. The structure of the dissertation is shown in Figure 1.1.

Figure 1.1: Structure of the dissertation



6.1 Chapter 2: The effect of ad integration and interactivity on young teenagers' memory, brand attitude and personal data sharing

Chapter 2 investigates the joint effects of the main characteristics of online contemporary advertising formats, integration and interactivity, on young teenagers' (11-14 years) processing of brand information, brand attitude and personal data sharing, by means of a 2 (integrated advertising format vs non-integrated advertising format) x 2 (brand-interactive advertising format vs non-brand interactive advertising format) between subjects experiment. Participants were exposed to and had to interact with one advertising stimulus out of four that were

especially developed for this study by a professional website and game development agency: two gaming (integrated) and two banner (non-integrated) stimuli. In the gaming conditions the integration of the brand was either non-brand-interactive (i.e. in-game advertising) or either brand-interactive in that the branded information was the focal element of the game (i.e. an advergame). The two non-integrated banner stimuli appeared on a website. One banner condition was clickable and thus brand-interactive, while the other one was not. The Limited Capacity Model of Mediated Message Processing (Lang, 2000) and the Limited Capacity Model of Attention (Kahneman, 1973) were used to investigate the effect of both integration and interactivity on youngsters' memory of brand information. The mechanism behind the effect of ad integration and ad interactivity on personal data sharing was investigated from a persuasion knowledge perspective by means of two serial mediation models (each with either brand integration or brand interactivity as the independent variable) with three mediators (awareness of selling intent, critical processing and brand attitude). As opposed to previous studies, participants' *actual* personal data sharing behaviour was measured, instead of measuring data sharing *intentions*, and four different advertising formats were tested instead of focussing on only one.

6.2 Chapter 3: The effect of personalised advertising, an advertising cue, and youngsters' age on awareness of selling intent and word-of-mouth intention

The third chapter builds further on the phenomenon of personal data collection by advertisers and the subsequent personalisation of advertising messages based on this personal information. Although children younger than 13 are officially not allowed to create an account on social networking sites like Facebook and Twitter (Facebook, 2018; Twitter, 2018), research has shown that younger children do create an account on these social networking sites and circumvent the age rule by indicating an incorrect age on their profile (Livingstone, Mascheroni, Ólafsson, & Haddon, 2014). As users disclose information about themselves on social networking sites, personalisation is often used as an ad strategy on these platforms (Bright & Daugherty, 2012). However, research on the effects of personalised advertising has mainly focussed on (young) adults, and it has not investigated and compared the effects of this advertising strategy on children and young teenagers. Moreover, this chapter investigates the effect of an advertising cue to test whether the presence of such a cue helps youngsters to recognise sponsored messages (native advertising) as a commercial message, because this form of advertising is more difficult to recognise as it resembles the posts of someone's connection within its social network (Boerman, Willemsen, & Van Der Aa, 2017). Additionally, age is

included as a variable in this chapter, to explore whether there are differences in responses between children and young teenagers. A 2 (personalisation vs non-personalisation) X 2 (advertising cue vs no cue) X 2 (age/grade: 5th grade (age 9-11 years) vs 7th grade (12-13 years)) between-subjects online experiment explored the effect of ad personalisation on Facebook, and the moderating role of an advertising cue and youngsters' age on their awareness of selling intent and word-of-mouth (WOM) intention.

6.3 Chapter 4: Advertisers' perceptions regarding the ethical appropriateness of new advertising formats aimed at minors

Research on advertising literacy has mainly focused on children and teenagers. However, it is relevant to also study advertisers' perceptions regarding the use of contemporary advertising formats aimed at these target groups, because after all, they are important decision makers who play a key role in deciding to whom their advertising campaigns will be addressed and which tactics, stimuli and media channels they will use to spread their message. Moreover, they are in charge of the compliance of their campaigns to legislation and exert power over self-regulation guidelines. In academic research, very little attention has been devoted to the perceptions of advertisers. The fourth chapter fills this gap by examining advertising professionals' opinions about the ethical appropriateness of using novel advertising formats aimed at children and teenagers, and their views of practices that are potentially privacy-invading (requesting youngsters to register, collect personal data or using tracking cookies), by means of both a quantitative online survey with 90 advertising professionals and using nine vignettes that described new integrated and/or interactive advertising formats used to target minors, and ten qualitative follow-up in-depth interviews with Belgian advertising professionals. Also in this chapter, we distinguish between two age groups: children between 6 and 12 years old and teenagers between 13 and 18 years old.

6.4 Chapter 5: Parents' concerns about, and parental mediation of contemporary advertising on different media devices. The effects of children's age, and parents' gender and educational level

Parents or legal guardians are crucial stakeholders as they monitor their children's media use, media exposure and consequently advertising's effect on children and teenagers. Parents can thus play a crucial role in developing their children's advertising literacy. Parents have indeed been found to be concerned about their children spending too much time with media and their exposure to materialism and advertising (Common Sense Media, 2017a). By means of an online

survey with 340 parents (200 with young children aged 6-12 years and 140 with teenagers aged 13-18 years), this chapter investigates parental concerns regarding contemporary advertising formats, parental mediation strategies used for different media devices, and the influence of children's age, and parents' gender and educational level. Three parental mediation strategies are studied: restrictive mediation, active mediation and co-viewing (Nathanson, 2001; Nikken & Jansz, 2006; Valkenburg et al., 1999). Contrary to previous studies that have mainly focused on television and online media in general, this chapter compares mediation strategies for four different media devices: television, laptop, tablet and smartphone.

6.5 Chapter 6: Co-creating advertising literacy awareness campaigns for minors.

As the features of online contemporary advertising formats can hamper persuasion knowledge activation and might persuade youngsters beyond their consciousness, there is a necessity to improve the advertising literacy of children and teenagers (Nelson, 2016). Therefore this chapter starts from a public policy perspective and develops the components of awareness campaigns to advance advertising literacy in youngsters. As was done in the previous chapters, an explicit distinction was made between children and teenagers. Moreover, the perspectives and input of both youngsters and advertising professionals were integrated. By means of eight qualitative co-creation workshops with children of the 4th grade (9-10 years) and teenagers of the 7th grade (12-13 years) and one co-creation workshop with professionals, insights into children's appreciation of advertising on various media devices and their preferences for campaigns elements were explored. As was done in the previous chapters, again, an explicit distinction was made between children and teenagers. Moreover, this chapter integrates the perspectives and input of both youngsters and advertising professionals.

The final chapter summarises the findings, discusses theoretical contributions and implications for advertisers and public policy, and offers suggestions for further research.

Chapter 2

The effect of ad integration and interactivity on young teenagers' memory, brand attitude and personal data sharing¹

¹ An earlier version of this paper was presented at the 2018 ICORIA conference in Valencia, Spain.

Chapter 2 The effect of ad integration and interactivity on young teenagers' memory, brand attitude and personal data sharing

Abstract

We examine the effect of brand interactivity of online advertising and its integration in other content on young teenagers' (11-14 years) information processing (memory), brand attitude, and their sharing of personal information, by means of a two (integration vs no integration) x two (brand interactivity vs no brand interactivity) between subjects experiment with Belgian participants (n = 576). Results show that brand interactivity has a positive effect on recognition of product- and brand-related information, whereas integration has a negative effect. Product- and brand-related information is best memorised after exposure to an interactive, non-integrated stimulus. Brand attitude is positively influenced by brand interactivity, but not by integration. Brand attitude is most positive after exposure to an interactive, non-integrated ad. Brand interactivity and ad integration have no direct effect on personal data sharing. Two serial mediation models with three mediators (awareness of selling intent, critical processing and brand attitude) explore the mechanism behind the effect of ad integration and ad interactivity on personal data sharing. The positive effect of ad interactivity on personal data sharing is fully mediated by awareness of selling intent, critical processing and brand attitude, while the effect of ad integration is not.

1 Introduction

The current study investigates the effects of brand integration and brand interactivity in online advertising formats on young teenagers' (aged 11-14 years) brand information memory, brand attitude and sharing of personal data, and the mechanism through which brand integration and brand interactivity lead to personal data sharing.

Contemporary online advertising formats are omnipresent. They are characterised by integration of advertising in other content (games, websites) and brand interactivity. Integrated advertising makes it harder to distinguish advertising from other media content as the advertising messages are embedded in media content (Calvert, 2008). Brand-interactive advertising increases engagement with advertised brands and influences people's affective

reactions to it, since the brand-interactive content can be perceived as playful and enjoyable without being aware that the content is advertising (Mallinckrodt & Mizerski, 2007). The integrated and/or brand-interactive nature of advertising make it thus less likely to recognise stimuli as advertising, or lead consumers to be implicitly persuaded by them. In order to be effective, advertisers have to make sure that ads carry over brand information and develop a positive attitude towards their brand. Integration and brand interactivity might thus influence the processing of branded elements and consumers' cognitive and attitudinal responses (Lee & Faber, 2007; Nelson, 2002). Another objective of contemporary advertising formats is often their purpose of gathering personal data that subsequently can be used to tailor commercial messages to individuals' characteristics, interest and needs (Boerman et al., 2017; Cai & Zhao, 2013). This raises privacy concerns, as consumers are often unaware of the intentions behind these techniques (Youn, 2009).

Due to their limited cognitive capabilities, children and teenagers are even more vulnerable to persuasion by contemporary advertising formats than adults (Panic et al., 2013). Moreover, the disclosure of personal information by children and teenagers often happens without parents' approval (Cai & Zhao, 2013). Websites or games that are popular amongst minors often ask for personal information to register or to create an account (Cai & Zhao, 2010, 2013; Lee & Youn, 2008; Shin, Huh, & Faber, 2012; Walrave & Heirman, 2013). Minors' brand information memory, brand attitude, and the sharing of personal information may all be influenced by the integrated and interactive character of the advertising format. Because of the ubiquitous presence in the online world, children and teenagers encounter these contemporary advertising formats, frequently during their daily online activities. The current study examines how contemporary advertising tactics influence youngsters' brand information memory, brand attitude and sharing of personal data with advertisers when requested to do so.

We focus on young teenagers (11-14 years). This age category was chosen for several reasons. Young teenagers are confronted with integrated and interactive advertising formats regularly (e.g. playing games, visiting websites, using social media, etc.) as they spend lots of time online (Common Sense Media, 2017a, 2017b; Daems, Moons, & De Pelsmacker, 2017; Ofcom, 2017). For instance in the United Kingdom, the average teenager (12-15 years) spends 21 hours per week online and uses the mobile phone for an average of 18 hours per week (Ofcom, 2017). American teenagers (13-18 year) use on average media for 9 hours per day during their leisure time (not including work for school), whereas this is 6 hours for tweens (8-12 years) (Common Sense Media, 2017b). Children and teenagers use online media for a diverse range of activities,

from playing games, watching video content, doing homework, access news content to interact with peers and friends (Apestaartjaren, 2016; Common Sense Media, 2017a, 2017b; Ofcom, 2017). The same pattern of media use is present among youngsters in Flanders (Belgium), the context of this study. The mobile phone is the most popular device among Belgian teenagers (12-18 years), with 92% of the teenagers possessing their own mobile phone. Almost 58% have their own laptop, and 41.6% have their own tablet (Apestaartjaren, 2016).

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 also indicates that children have more difficulties in understanding the persuasive and commercial nature of non-traditional, integrated (e.g. in-game advertising) or interactive advertising formats (e.g. advergames) (Owen et al., 2013; Panic et al., 2013), and that even at age 12 children have not fully acquired an adult-like understanding of persuasive and selling intent (Rozendaal et al., 2010). Finally, research has focused mainly on children or teenagers between 14 and 18 years old and less on younger adolescents between 11 and 13 years. However, in the debate about advertising targeted at children and teenagers, the age of 12-13 years is perceived as a crucial age. According to advertisers, this age is considered as a reference age from which onwards advertising can be used without restrictions (Daems, De Pelsmacker, & Moons, 2017).

Based on a 2 (integrated advertising vs non-integrated advertising) X 2 (brand-interactive advertising versus non-brand-interactive advertising) between subjects experiment, the current study tries to answer the following research questions:

RQ 1: What are the effects of the integration of brand information and brand interactivity in advertising stimuli on brand-related information memory, brand attitude, and the sharing of personal information in young teenagers?

RQ 2: How can the effects of integration and interactivity on the sharing of personal information be explained by awareness of selling intent, critical processing and brand attitude?

The study offers several contributions. First, it explores the joint effects of two distinct features of contemporary online advertising formats often targeted at children and teenagers, i.e. brand integration and brand interactivity, on youngsters' ad responses instead of focusing on one advertising format only, as is done in most previous studies. Second, we focus on young

teenagers (11-14 years), a crucial age cohort that is only seldom studied in research about advertising effects, while this group is often targeted by online advertisers and is thus often exposed to integrated and/or interactive advertising formats during their daily online activities. Third, this study is one of the first to specifically focus on young teenagers' actual sharing of personal data as a behavioural response to advertising exposure. Given the widespread practice of advertisers' online information collection and information sharing by minors, youngsters' sharing of personal information is an important dependent variable in this study. This variable is measured by real data sharing instead of using data sharing intentions only, as done in previous studies (Heirman et al., 2013; Walrave & Heirman, 2013). Personal data sharing is an outcome variable that has received scant attention in academic literature as a reaction to an advertising stimulus so far. Though research in the UK among teenagers between 12 and 17 years old, pointed to the importance of this reaction due to the fact that 46% of teenagers has shared personal information online and that 72% of them would do so if they could win a prize (Livingstone & Helsper, 2008). Next to this behavioural ad response, cognitive (memory) and evaluative (brand attitude) ad responses are investigated as well. Fourth, this study aims to unravel the mechanism behind the effect of online brand integration and brand interactivity on the sharing of personal information based on the Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994), by exploring the mediating role of awareness of selling intent, critical processing and brand attitude. Finally, unlike many other studies, the current study is based on realistic integrated and/or interactive stimuli, developed by a professional game and website designer.

Our study is relevant for advertisers in that it informs them about the effects of advertising format characteristics on advertising effectiveness, and may also make them take into consideration new insights on the vulnerability of teenagers and the effects of contemporary new advertising formats on them. Our study also provides implications for public policy. These insights can be used in the debate on the appropriateness of these advertising formats aimed at minors and regulations needed to protect them.

2 Literature review and hypotheses development

2.1 Characteristics of contemporary advertising formats: integration and brand interactivity

Children and teenagers grow up in an online world, in which they are increasingly targeted by online advertisers (Calvert, 2008; Shin et al., 2012). Integration and interactivity are two characteristics that distinguish novel, contemporary advertising from traditional advertising such as television advertising (Owen et al., 2014; Owen et al., 2013; Panic et al., 2013). *Integrated advertising* is advertising that embeds a persuasive message into informative or entertaining content resulting in advertising formats with a simultaneous exposure to both the media content and the integrated advertising message, which makes it harder to distinguish the commercial message from entertainment and information (Blades et al., 2014; Buijzen et al., 2010; Calvert, 2008; Wright et al., 2005). Brand placement, ‘*the paid inclusion of brand identifiers in media content (television programmes, movies, games)*’ (Gupta and Lord 1998; Karrh 1998) is an example of integrated advertising.

Brand interactivity refers to the level of interaction or activity consumers can have with an advertising message instead of being passively exposed to it (Liu & Shrum, 2009). An online clickable banner is an example of an interactive advertising format. *Brand interactivity* refers to interactions consumer can have *with brands*, by clicking on banners or pop-ups that contain brand-related information or by clicking on brands in games (Lee, Park, & Wise, 2014).

Advertising can be either integrated or brand-interactive, both integrated and brand-interactive, or neither integrated nor brand-interactive. A static, non-clickable online banner is an example of a non-integrated, non-interactive advertising format. Banners can be considered as an advertising format that is not integrated because the locations on the website where banners appear are solely dedicated to commercial messages and are thus not connected to the other content on the webpage or website itself. Moreover, banners have a clear recognisable shape, which makes them distinguishable from other webpage content (Zarouali, Walrave, Poels, Ponnet, & Vanwesenbeeck, 2016) and are therefore considered as a distinct and prominent advertising format (Tutaj & van Reijmersdal, 2012). If a banner is not clickable, it is not possible to interact with the brand information in the banner. A clickable banner, on the other hand, is interactive, but not integrated.

If a product or brand is integrated in a game, but the player cannot interact with the brand (e.g. a billboard ad in the background of a game or alongside the game, that is not part of the game play itself), this format is defined as ‘in-game advertising (IGA)’, *the inclusion of products or brands within a game* (Terlutter & Capella, 2013 p. 95). In-game advertising is thus brand placement in games (Nelson, Yaros, & Keum, 2006). Integrating a billboard in the background of a game is so called ‘*associative*’ brand integration (Lee, Choi, Quilliam, & Cole, 2009) or passive brand integration (Nelson, 2002). If a brand is integrated in the game and is part of the game play in that players can interact with it, this format is both integrated and interactive. A special case of such a game is an *advergame*, ‘*a game which is designed and created to promote an existing brand, product, service or idea and which contains branded information such as a brand logo, brand characters or an advertising message*’ (Terlutter & Capella, 2013 p. 96). In these game formats, the brand is part of the game, which makes it an integrated advertising format. If, for instance, a player can play with branded blocks in a puzzle game, they interact with the brand as these are the central game elements (Mallinckrodt & Mizerski, 2007; Panic et al., 2013; Terlutter & Capella, 2013), which makes it interactive brand integration (Lee et al., 2009; Nelson, 2002).

In the current study, four advertising formats are studied, two gaming (integrated) and two banner (non-integrated) stimuli. The two gaming conditions integrate the brand information in the gaming context. In the *in-game advertising* condition, the integration is *associative* (the brand information is non-interactive). The *advergame condition* is an example of *illustrative* brand integration (the brand information is interactive). The two banner conditions in the experiment are non-integrated stimuli that appear on a website. One banner condition allows brand interactivity, while the other does not. The formats in our study are prominent examples in which integrated and/or interactive advertising tactics are used. For detailed information about the experimental stimuli, see the method section. In the remainder of the manuscript, we refer to brand interactivity when a stimulus allows interactivity with the focal brand of the study.

2.2 The effect of integration and interactivity on memory, brand attitude and sharing of personal information

2.2.1 Memory

According to Raney et al. (2003), compared to non-interactive advertising, brand-interactive advertising puts the advertising stimulus more central. As a consequence, brand interactivity enhances processing of interactive, brand-related information. If individuals have the

opportunity to interact with certain stimuli, they will be more engaged to the stimuli instead of passively looking at it (Panic et al., 2013; van Reijmersdal et al., 2012). Brand interactivity thus raises engagement with the interactive brand information, leading to higher levels of attention devoted to this information (Panic et al., 2013; Yeu, Yoon, Taylor, & Lee, 2013). Indeed, Nelson (2002) shows that if game players can actively interact with branded game elements, this improved brand recall. We expect:

H1a: Brand information is better remembered if it is interactive than if it is not interactive.

One of the main goals of advertisers is to have consumers remember the brand-related information provided in the advertisement. Both advertising message integration and brand interactivity can have an effect on how message recipients process brand-related advertising information. As to the effect of brand integration, the Limited Capacity Model of Mediated Message Processing (Lang, 2000) is relevant to investigate the information processing and memory effects. This model starts from the premise that cognitive resources are limited, resulting in limited capacity to process information. If the receiver of the message does not allocate sufficient resources required by the task, information will not be completely processed. Second, as the available cognitive resources are limited, it is possible that the task requires more resources than the message receiver has available at the information processing moment, leading to less memory. Another relevant framework is the Limited Capacity Model of Attention (Kahneman, 1973). This model states that a person divides his or her cognitive resources or attention over different simultaneous tasks, devoting most attention to the most prominent or primary task. Cognitive capacity used for the accomplishment of the primary task, cannot be used for the fulfilment of other surrounding tasks. If the necessary cognitive resources for the other remaining tasks overrule the overall cognitive capacity of an individual, processing or fulfilment of the remaining tasks fails. Accurate information processing is a crucial condition for storing and retrieving the information in one's memory. If an advertisement is integrated into other entertaining or informational content, most of an individual's attention will be devoted to process this content, for instance reading online content on the web or playing a game (Lee & Faber, 2007). In such a context, processing brand information is a secondary task.

Based on both models, if brand-related information is integrated into entertaining or informative media context, cognitive capacity and attention will be devoted to the primary task, namely entertainment or information search, leaving little capacity for the secondary task (processing

of brand information) (Lee & Faber, 2007; Rifon et al., 2014). Brand-related information will thus be remembered less easily in an integrated advertising format (e.g., a game) compared to a commercial message which appears stand alone, without being integrated into other media content (e.g. an online banner) (Lee & Faber, 2007; van Reijmersdal et al., 2012). This is especially the case for children and teenagers as their information processing skills are less developed than those of adults (Moses & Baldwin, 2005; Rozendaal et al., 2010). We expect:

H1b: Brand information that is not integrated in content is better remembered than brand information that is integrated in content.

We expect that the positive effects of brand interactivity and non-integration will interact to reinforce each other. When brand information is not integrated into other media content, an individual does not have to concentrate on two different tasks (Kahneman, 1973) and needs less cognitive capacity to process brand information (Lang, 2000). On top of that, brand interactivity leads to better memory effects. Research has indeed found that recall of embedded brands in a game is higher for people who simply watch a game being played, instead of playing the game (Nelson et al., 2006). We thus expect that brand-interactive non-integrated advertising will lead to higher memory effects than the other three conditions:

H1c: Brand information is better remembered if the information appears in a brand-interactive non-integrated advertising format than in a non-interactive non-integrated format or in integrated formats.

2.2.2 *Brand attitude*

Brand interactivity leads to more positive brand attitudes compared to non-brand-interactive stimuli (Ariely, 2000; Sundar & Kim, 2005). Interactivity generates increased elaboration, involvement with the advertised brand, resulting in more positive attitudes (Hang & Auty, 2011; Mallinckrodt & Mizerski, 2007; van Reijmersdal et al., 2012). For instance, Lee et al. (2014) found that brand interactivity enhances persuasion effects and established positive brand attitudes towards the placed brand in games. van Reijmersdal, Jansz, Peters, and Van Noort (2010) found that interactivity of product placement resulted in more positive brand image compared to brand placement without the opportunity to interact with the brand. This can be explained by the Affect Transfer Mechanism (Hang & Auty, 2011; Raney et al., 2003; Rifon et al., 2014; van Reijmersdal et al., 2012). If an individual interacts with an entertaining context

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(e.g. a game or a banner), this creates a positive affect that will spill over to the brand (Kim, Lim, & Bhargava, 1998; Nelson et al., 2006; van Reijmersdal et al., 2012). We expect:

H2a: Brand-interactive advertising formats lead to a more positive brand attitude than non-brand-interactive formats.

Integrating commercial messages into media context that is entertaining and challenging (e.g. television series, games, music videos, etc.) is often regarded as a technique that results in more positive brand attitudes, as a result of the affect transfer mechanism (Rifon et al., 2014; van Reijmersdal et al., 2012). The fun and enjoyable characteristics of, for instance, a game, are likely to spill over to the integrated brands (Mallinckrodt & Mizerski, 2007). The integration of the commercial message can result in an inability to critically reflect upon the integrated brand as a persuasive message. This is even more the case with children and teenagers (John, 1999; Terlutter & Capella, 2013). We expect:

H2b: Brand information integrated in content leads to a more positive brand attitude than brand information that is not integrated in content.

We expect that the positive effects of brand interactivity and integration will interact to reinforce each other. Research on in-game advertising has suggested that making integrated advertising brand-interactive results in a more thorough engagement with the advertised message resulting in more favourable attitudes towards the advertised brand (Hang & Auty, 2011; Lewis & Porter, 2010). Dens, De Pelsmacker, Goos, and Aleksandrovs (2016) report that the effectiveness of brand placement is enhanced by brand interactivity. It can thus be expected that brand-interactive integrated advertising leads to a more positive brand attitude than the other three conditions:

H2c: Brand attitude is more positive if the brand appears in an interactive integrated advertising format than in a non-interactive integrated format or in non-integrated formats.

2.2.3 *Personal data sharing*

The decision to disclose personal information online depends on a particular context (e.g. a specific website or a specific brand) (Li, Sarathy, & Xu, 2011) and on a trade-off between the perceived benefits and perceived costs, risks or concerns, associated with the actual information sharing (e.g. privacy concerns) (Norberg, Horne, & Horne, 2007; Walrave & Heirman, 2013;

Youn, 2005; Zhao & Renard, 2018). For instance, if consumers perceive that what they get in exchange for disclosing personal information is of greater value than the personal data itself, they will probably share their data (Norberg et al., 2007). These benefits consists of both economic (extrinsic) and psychological (intrinsic) factors (Zhao & Renard, 2018). Economic benefits can refer to information, monetary value or to the value of a product one can win by sharing data. Psychological factors refer to how relevant and informational a website is, or the perceived playfulness and joy of a game. In the debate concerning advertising aimed at youngsters, their ability to manage their personal information online is questioned (Walrave & Heirman, 2013). Research has found that children show a higher willingness to disclose information to advertisers compared to adults, and that children's willingness to do so increases when they are offered a gift in exchange for the sharing of their personal information, whereas adults' data sharing behaviour is hardly affected by this benefit (Turow & Nir, 2000). Concerning the sharing of personal data, children are found to rely more on the perceived benefits compared to the risks involved (Walrave & Heirman, 2013; Wright et al., 2005). Children's susceptibility to disclose information to a commercial agent might also depend on their cognitive abilities and knowledge about advertisers' tactics and purposes (Walrave & Heirman, 2013). Both integration and interactivity as advertising features might hamper children's persuasion knowledge activation or the development of advertising knowledge, which makes them more prone for advertisers' tactics (Walrave & Heirman, 2013).

Li et al. (2011) use the stimulus-organism-response (S-O-R) model to explain online consumers' personal information sharing behaviour. This model states that stimuli influence both cognitive and affective reactions of an individual (i.e. organism), which will influence the individual's behaviour (i.e. response). Website stimuli generate both cognitive (e.g. information) and affective responses (e.g. attitudes, feelings, emotions) and this affects behaviour such as the sharing of personal information (Li et al., 2011).

Compared to a non-brand-interactive ad, brand-interactive advertising in which the receiver can interact with brand-related information, leads to more engagement, resulting in a stronger involvement with the media and the brand (Rifon et al., 2014). This engagement is the result of the active control a person has over an interactive stimulus (Liu & Shrum, 2002). Involvement might enhance persuasion, making young teenagers more susceptible for advertising effects (Lee et al., 2009; van Reijmersdal et al., 2012). If an individual is more involved with an ad stimulus, this could encourage young teenagers to share more personal information with the advertiser.

H3a: Brand-interactive advertising formats lead to more personal information sharing than non-brand-interactive formats.

Integrating brands in games is explicitly done to have the effect of a playful and enjoyable context spilling over to the advertised brand (Raney et al., 2003; van Reijmersdal et al., 2012). Consistent with the stimulus response model and the affect transfer mechanism, if an advertising stimulus is perceived as positive, these affective evaluations might increase an individual's sharing of personal data with the advertiser (Zhao & Renard, 2018). Zhao and Renard (2018) show that, if adult advergame players perceive the game to be playful, this results in more actual personal data sharing. As adults are more likely to understand the commercial intent of advertising formats, one would expect that young teenagers are even more susceptible to share their personal data when asked to do so in order to win a prize. We thus expect:

H3b: Integrated advertising formats lead to more personal information sharing than non-integrated formats.

Similar to our reasoning leading up to hypothesis 2c, we expect that the positive effects of brand interactivity and integration will interact to reinforce each other. It can thus be expected that brand-interactive integrated advertising leads to a more personal data sharing than the other three conditions:

H3c: Personal information is more shared if the brand appears in an interactive integrated advertising format than in a non-interactive integrated format or in non-integrated formats.

2.3 The mediating role of awareness of selling intent, critical processing and brand attitude for personal data sharing

In this section we explore the mediating role of awareness of selling intent, critical processing and brand attitude to unravel the mechanisms through which brand integration and brand interactivity lead to personal information sharing.

The Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994) describes the knowledge, skills and experiences an individual has to possess in order to be able to cope with persuasive attempts. In an advertising context, an essential element of developing persuasion knowledge is the awareness of a persuasive selling intent (Moses & Baldwin, 2005; Rozendaal et al., 2010).

Selling intent refers to the advertiser's effort to influence the feelings, the beliefs and attitudes and the buying behaviour of the consumer (Moses & Baldwin, 2005; Rozendaal et al., 2010).

Some studies argue that interactivity in advertising results in higher levels of involvement. For instance, playing a game is an immersive activity, in which a player will mostly focus on game play itself and the accomplishment of the game (Panic et al., 2013). As a result it could be less likely that persuasion knowledge is activated because most attention is devoted to the game play itself, resulting in less awareness of selling intent (Campbell & Kirmani, 2000; Panic et al., 2013).

However, one can also argue that if an individual can interact with a product or brand, this will lead to more engagement with the stimulus and results in higher elaboration and more intense processing of the stimulus (Hang & Auty, 2011). This intensive processing of the stimulus might trigger consumers' persuasion knowledge or selling intent (Friestad & Wright, 1994; Hang & Auty, 2011). For instance, Rifon et al. (2014) found that interactivity (playing versus watching an advergaming) activated greater persuasion knowledge. If an individual clicks intentionally on a banner and processes the information it is likely that he or she is aware of the persuasive intent of the banner. Moreover, if youngsters have interactive control over a brand in a banner or a game (as is the case in our study), this will result in a high level of information processing such as higher brand recognition (Hang, 2016). This level of information processing might activate their persuasion knowledge as they start wondering about the intention of the brand in the banner or the game (Hang, 2016). This trigger to search for the purpose of the brand's presence is powerful enough to overrule the playful and entertaining game context (Hang, 2016). Based on the latter reasoning and evidence, we expect:

H4a: Brand interactivity has a positive effect on the awareness of selling intent.

Integrating a commercial message into media context results in subtle advertising (Buijzen et al., 2010; Calvert, 2008; Raney et al., 2003). In order to be able to cope with advertising, the first premise is that one should be able to identify it as such (Brucks et al., 1988; Friestad & Wright, 2005; Moses & Baldwin, 2005). However, integrating an advertising message into media content will make it more difficult to do so, and it will thus be less likely that persuasion knowledge will be activated and awareness of selling intent might thus not be triggered (Friestad & Wright, 1994; Moses & Baldwin, 2005; Panic et al., 2013). We expect:

H4b: Brand integration will have a negative effect on the awareness of selling intent.

If an individual's awareness of selling intent is activated, he or she will try to cope with the advertiser's intentions (Friestad & Wright, 1994; Wright et al., 2005). This leads to critical processing (Friestad & Wright, 1994), which will negatively affect brand attitude (Boerman et al., 2012, 2014; Campbell & Kirmani, 2000; Stern & An, 2009). Therefore, we expect:

H5: Awareness of selling intent has a positive effect on critical processing.

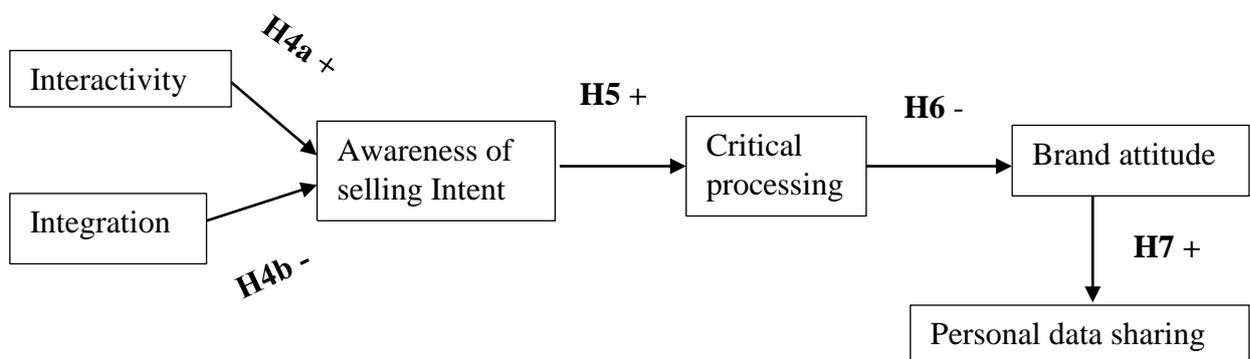
H6: Critical processing has a negative effect on brand attitude.

Li et al. (2011) and Zhao and Renard (2018) argue that positive responses towards components of online stimuli, such as a brand, will result in more actual sharing of personal data (Zhao & Renard, 2018). Attitudes are a psychological reaction that an individual can have towards a particular stimulus, which can influence how an individual will react toward that stimulus (stimulus-organisms-response model) (Li et al., 2011). A more positive brand attitude will thus positively affect the sharing of personal information with an advertiser:

H7: Brand attitude has a positive effect on an individual's sharing of personal information.

The conceptual model underlying H4-H7 is presented in Figure 2.1.

Figure 2.1: How brand integration and brand interactivity affects personal data sharing: the mediating role of awareness of selling intent, critical processing and brand attitude



3 Method

3.1 Design and stimuli

A 2 (integrated advertising format vs non-integrated advertising format) x 2 (brand-interactive advertising format vs non-brand-interactive advertising format) between subjects experiment was conducted. The focal brand was the fictitious smartphone brand *Delta*. A smartphone was chosen since it was expected that it is equally appealing to both boys and girls between 11 and 14 years old. It was also expected that the smartphone would be a highly involving product amongst the participants, since 92.3% of Flemish teenagers between 12-18 year old possess their own smartphone and use it for various activities; watching video content, gaming, social interaction with friends, access to (news) information, streaming music etc. (Apestaartjaren, 2016). Moreover, the smartphone is reported to be the most preferred and most indispensable media device among teenagers (Vanhaelewyn & De Marez, 2017).

In order to decide on the advertising formats to be developed for the study, three experts in contemporary advertising formats and four game developers were interviewed. They gave input on the kind of formats that should be used to simulate integration and interactivity, which resulted in four different stimuli that were created by a professional website and game developer. In each of these stimuli, the focal brand *Delta* was used, as well as a filler brand called *Heidi the ride*, a rollercoaster attraction in an existing amusement park. In each of the conditions three characteristics of the smartphone were featured: three colours, three prices, and three phone memory capacity levels. The integrated brand-interactive condition was an advergame in which the participants played a game manipulating game elements related to the smartphone. On the left hand side, in a static banner *Heidi the ride* was shown, featuring an equal number of characteristics of the attraction (speed, height and atmosphere of the roller coaster). The integrated non-brand-interactive condition was the same game, but in this case participants had to interact with *Heidi the ride*, while *Delta* was advertised by means of a banner at the left hand side of the screen, again featuring the three phone characteristics. From the point of view of *Delta*, this corresponds to an in-game advertising condition. In the gaming conditions (both '*Delta*' advergame and '*Delta*' in-game advertising), at the beginning of the game the participants saw a visual demo instruction about how the game should be played for ten seconds before they could play the game themselves. Then, each participant had to play a puzzle game. At the end of the game, the logo of either the smartphone brand '*Delta*' or the '*Heidi the ride*' logo appeared on the background of the game board and the game started again. Each puzzle

element in the game contained information about characteristics of either the smartphone (colour, price or capacity) or the roller coaster (speed, height and atmosphere) depending on the experimental condition the participant was assigned to. When the duration of the actual game play (70 seconds) was over, participants saw a ten seconds count down before they were automatically redirected to the survey.

In the non-integrated banner conditions the participants were exposed to a website containing three different banners. The non-integrated brand-interactive condition was a clickable banner featuring Delta and its characteristics on which the participants could click for further information shown in pop-ups. The pop-ups consisted of three different pictures with a short textual message (e.g. '€199') that provided more information about the advertised brand, identical to the information in the gaming conditions (colour, price and capacity of the smartphone). A static Heidi the ride banner was also shown on the same page, again featuring its three information characteristics (speed, height and atmosphere of the roller coaster). The non-integrated non-brand-interactive banner condition were three different clickable banners featuring Heidi the ride and its characteristics on which the participants could click for further information, again shown in pop-ups. Static (non-clickable) Delta banners were also shown on the same page, again featuring all its information. Participants viewed the banners for 70 seconds.

In all four conditions, participants were exposed to the experimental stimuli for one minute and ten seconds. Exposure time was thus held constant across conditions to exclude potential confounding effects of different exposure times (Rifon et al., 2014). Screen shots of the stimuli can be found in appendix 8.1. Table 2.1 gives an overview of the different experimental conditions.

Table 2.1: Four experimental conditions

	Integrated ad for smartphone brand	Non-integrated ad for the smartphone brand
Brand-interactive ad (interaction with the smartphone brand)	Advergame smartphone (integrated – brand-interactive)	Interactive banner smartphone (non-integrated – brand-interactive)
Non-brand-interactive ad (no interaction with the smartphone brand)	Advergame rollercoaster (integrated – non-brand-interactive)	Interactive banner rollercoaster (non-integrated – non-brand- interactive)

3.2 Participants

Participants in the experiment were pupils of the 7th or 8th grade (aged 11-14 years) contacted via six different secondary schools in Flanders, Belgium. 576 Flemish children (53.30% boys) between 11 and 14 years old ($M = 12.57$ years; $SD = 0.78$) participated in the study.

3.3 Procedure

The experiment took place in a computer room at school under the supervision of the researchers. The schools took care of parental consent (see appendix 8.4) stressing the anonymity of the participants and the answers provided. Each participant had a computer at his or her disposal. At the start of the experiment the participants were given a short introduction instructing them how to answer the questions and how to interpret scale points. This was done by using simple examples as in other studies (Verhellen et al., 2014). One question asked how much the respondent liked swimming, with smileys representing the meaning of the corresponding scale points indicated in words as answering options (Mallinckrodt & Mizerski, 2007; Panic et al., 2013). It was explained to the children which answer they had to indicate when they do not like swimming at all or when they like swimming a bit. At the end of the test survey the participants were told that they would be exposed to a website and that they had to behave, read and click as if they would visit the website during their free time, and that afterwards they would be automatically redirected to the survey. Participants were randomly assigned to one of the four experimental conditions. Cell sizes are between 134 and 152. At the end of the experiment, participants were debriefed and again clearly informed that their responses were confidential and would be treated anonymously.

First, attitude towards the stimulus ('the website') was measured. Subsequently, participants were asked to share personal information (date of birth, favourite colour, telephone number, allow cookies). This was followed by brand recognition and measurements of brand information memory and attitude towards the brand. Next, awareness of selling intent was measured followed by critical processing. The questionnaire ended with demographic questions (gender, age and name of the school).

3.4 Measures

Independent variables

The independent measures of the study are the manipulated experimental conditions: integration of and interactivity with the smartphone brand.

Dependent variables

Brand recognition was measured by providing the participants with a list containing three existing (Samsung, iPhone and Huawei) and two fictitious (Zenith and Delta) brand names of smartphones and the answer option “*I don’t remember the smartphone’s brand name on the website*”. Respondents could only indicate one answer option out of the list. Brand recognition was coded as 1 if ‘Delta’ was indicated and as ‘0’ if one of the other options was indicated.

For *brand information memory*, respondents were asked questions about the types of information provided about the smartphone advertised. Respondents could select three options out of a list of nine (shape, colour, in which store available, quality of the camera, matching smartphone covers, screen size, battery life, memory capacity and price) and the option ‘*I did not receive information about the characteristics of the smartphone*’. The answers colour, price and memory capacity were correct. A dummy variable was defined that labelled each correct characteristic as 1 and labelled the incorrect characteristics and the answer option that they did not receive information about a smartphone as 0. Additional memory questions went into more detail about each specific smartphone characteristic (colour, prices and memory capacity) (e.g. “*Which colours of the smartphone have you seen on the website? You can only indicate three colours in total*”). For these questions the respondents could indicate three options out of a list of six characteristics or the option that they thought that they did not receive information about a specific smartphone characteristic. For each smartphone characteristic a variable was created coding the correct characteristic as 1 and the incorrect as 0. For each characteristic a new four-point measure (ranging from 0-3) was created, referring to the number of correctly indicated variations of each characteristic (whether 0, 1, 2 or all three correct variations were indicated). Finally, a 13-point (0-12) measure was created as an indication of *overall memory* across the different smartphone characteristics advertised. The measure included the three smartphone characteristics advertised and, for each of the three characteristics (colour, price and memory capacity), the three correct variations (three different colours, three different prices and three different smartphone memory capacities). Each point on this measurement was either coded as

1 (if the respondent indicated this specific smartphone characteristic correctly) or coded as 0 if it was not indicated.

To measure sharing of personal information, the participants were asked: “The website you saw contained information about a smartphone. This website also asks information about you. You can participate in a competition to win the smartphone. Fill in your date of birth, favourite colour, telephone number and whether or not you would allow the website to follow which other websites you would visit (referring to the use of cookies) in order to have a chance to win the smartphone”. If the respondents did not want to share one or more of these information items, they could indicate: “I do not want to share this information and thus, I cannot win the smartphone.” The description of the cookies was formulated as follows: “May the website follow the other websites you visit in order to have a chance to win the smartphone?”. A five-point measure (0-4) was created indicating how many of the four personal data characteristics the respondents were willing to share.

Mediating variables

Selling intent was measured as “Does the website you just saw, want you to desire the Delta smartphone?” on a five-point scale ranging from (No, definitely not – Yes, definitely) (Mallinckrodt and Mizerski (2007)). *Critical processing* was measured by the following items on a five-point scale ranging from Strongly disagree – Strongly agree: “While being on the website... a) I rather found it annoying that the Delta smartphone appeared”; b) I found the information about the Delta smartphone strange”; c) I did not found the Delta smartphone appropriate in the website context” (Boerman et al., 2014) ($\alpha=0.72$). The *attitude towards the brand* was measured with one item (“Do you like Delta, the smartphone you saw on the website?”) on a five-point scale ranging from (“I don’t like it at all” - “I like it very much”). Considering the target group in our study (young teenagers), the four-item scale by Holbrook and Batra (1987) was reduced to one item. After pre-testing, the formulation of the item was adapted to enhance the comprehensibility of the item for the target group.

Covariate

The attitude towards the stimulus was measured by means of the item “Do you like the website you just saw?”, ranging from “I don’t like it at all” - “I like it very much” on a five-point scale (Panic et al., 2013).

For all scales and created measures, smileys were included in the survey to enhance children's comprehension of the scale points (Mallinckrodt & Mizerski, 2007; Panic et al., 2013).

4 Results

4.1 Memory

Brand name recognition is higher in the brand-interactive formats than in the non-brand-interactive formats ($\chi^2 = 36.07$, $p < .001$), and higher in the non-integrated advertising formats compared to the integrated formats ($\chi^2 = 50.11$, $p < .001$), confirming hypotheses 1a and 1b with respect to brand recognition. Brand recognition is highest in the non-integrated interactive condition (interactive banner) (60.4%). This is followed by the integrated, non-brand-interactive ad (in-game advertising) (22.4%) and the non-integrated, non-brand-interactive ad (non-clickable banner) (21.0%). Brand recognition was lowest in the integrated - interactive condition (14.3%) (advergame). This confirms hypothesis 1c.

A two (integration) x two (brand interactivity) ANCOVA was carried out, with the attitude towards the stimulus as a covariate and the 13-point memory scale as the dependent (see table 2.2 for descriptives and table 2.3 for ANCOVA table). There is no significant effect of the covariate ($F(1, 571) = 1.05$, $p = .306$). There is a significant main effect of brand interactivity ($F(1, 571) = 154.35$, $p < .001$) showing that, compared to advertising that is not interactive ($M = 3.98$), brand interactivity has a positive effect on the number of product characteristics memorised ($M = 7.03$), confirming hypothesis 1a with respect to memory of brand information. There is also a significant main effect of integration on memory effects ($F(1, 571) = 21.18$, $p < .001$). Compared to non-integrated advertising ($M = 6.00$), integrated advertising lowers the number of product characteristics remembered ($M = 4.93$), supporting hypothesis 1b with respect to memory of brand information.

Table 2.2: Mean and standard deviations for memory of brand information

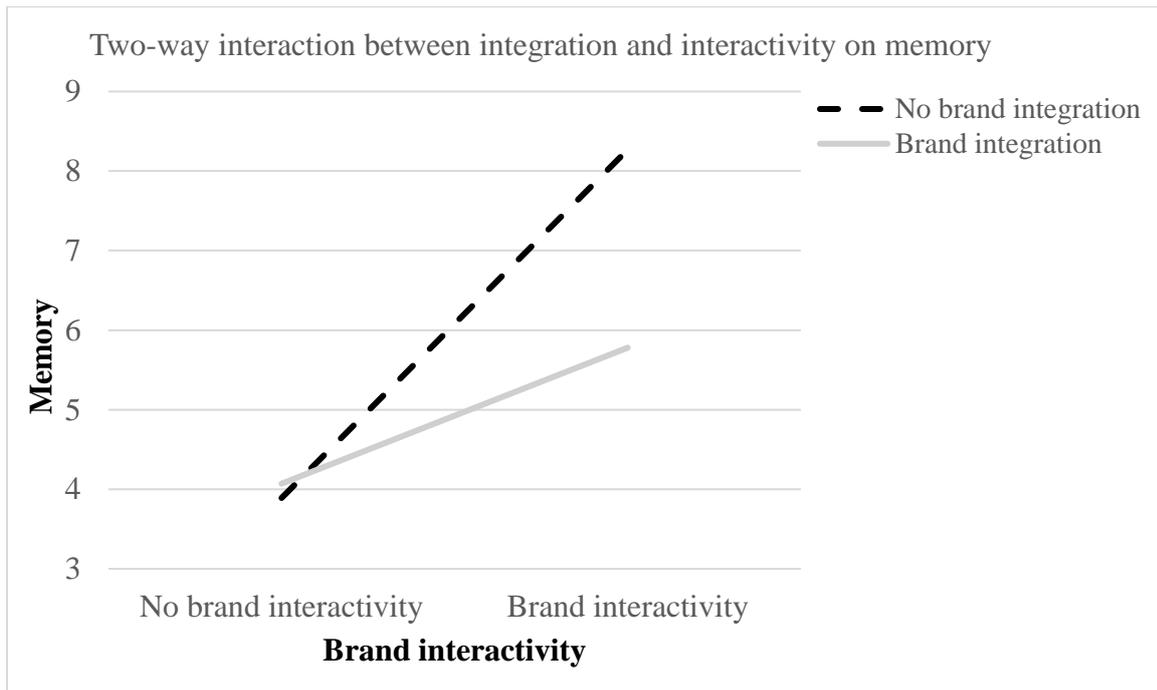
Brand integration	Brand interactivity	Mean	SD	N
No brand integration	No brand interactivity	3.87	2.92	143
	Brand interactivity	8.22	2.93	134
	Total	5.98	3.64	277
Brand Integration	No brand interactivity	4.12	2.98	152
	Brand interactivity	5.79	2.82	147
	Total	4.94	3.02	299
Total	No brand interactivity	4.00	2.95	295
	Brand interactivity	6.95	3.11	281
	Total	5.44	3.37	576

Table 2.3: ANCOVA table memory for brand information

	Type III sum of Squares	Df	Mean square	F	Sig	Partial Eta squared
Corrected Model	1682.162	4	420.541	49.472	<.001	.257
Intercept	882.955	1	882.955	103.870	<.001	.154
Covariate Attitude ad stimulus	8.933	1	8.933	1.051	.306	.002
Integration	180.031	1	180.031	21.179	<.001	.036
Interactivity	1312.056	1	1312.056	154.349	<.001	.213
Integration X Interactivity	256.552	1	256.552	30.181	<.001	.050
Error	4853.831	571	8.501			
Total	23588.000	576				
Corrected Total	6535.993	575				

The interaction effect between integration and interactivity is significant ($F(1, 571) = 30.18, p < .001$) (Figure 2.2). Simple effects analyses show that brand information that is both brand-interactive and not integrated (brand-interactive banner) leads to more remembered information ($M = 8.27$) than not integrated and non-brand-interactive ($M = 3.89$), integrated and non-brand-interactive ($M = 4.07$) and integrated and brand-interactive information ($M = 5.78$) (all $p < .001$). Hypothesis 1c is supported with respect to memory of brand information.

Figure 2.2: Two-way interaction between integration and interactivity on memory



4.2 Attitude towards the brand

A two (integration) x two (brand interactivity) ANCOVA was performed with brand attitude as the dependent and the attitude towards the stimulus as a covariate (see table 2.4 for descriptives and table 2.5 for ANCOVA table). There is a significant positive effect of the covariate on brand attitude ($F(1, 571) = 41.69, p < .001$). The main effect of brand interactivity is significant ($F(1, 571) = 17.91, p < .001$). Compared to an advertisement without interactivity with the brand ($M = 2.96$), interactivity with the brand has a positive effect on brand attitude ($M = 3.28$). Hypothesis 2a is thus supported. No main effect was found for integration ($F(1, 571) = 2.43, p = .120$). Hypothesis 2b is not supported.

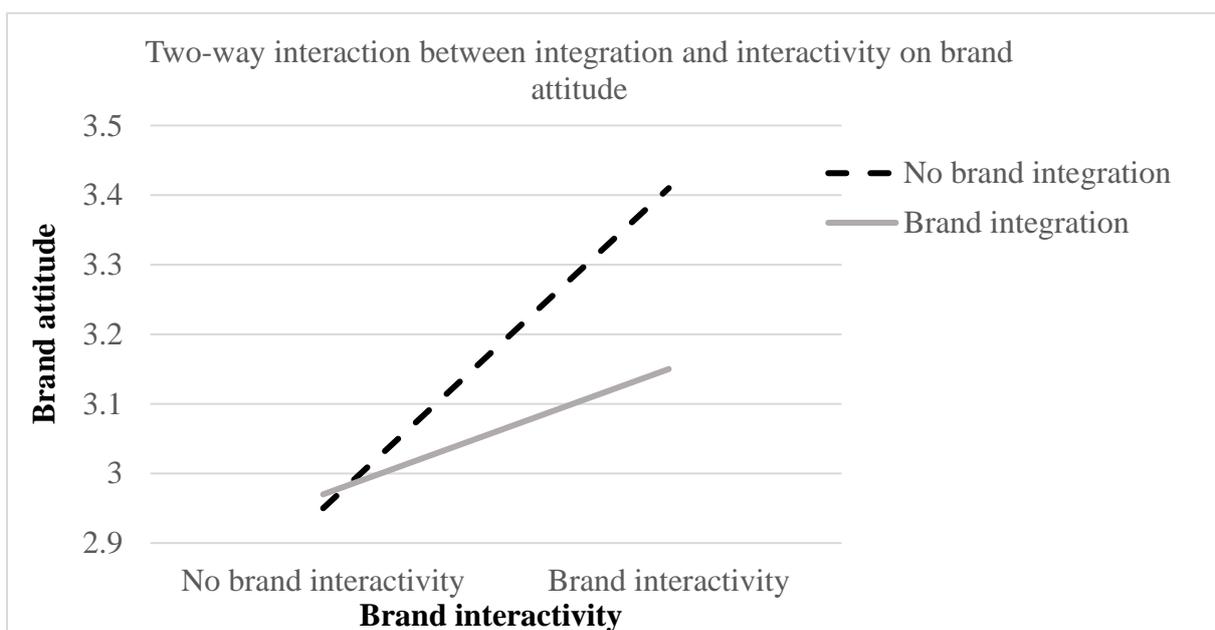
Table 2.4: Mean and standard deviations for brand attitude

Brand integration	Brand interactivity	Mean	SD	N
No brand integration	No brand interactivity	2.92	.88	143
	Brand interactivity	3.31	1.07	134
	Total	3.11	.99	277
Brand Integration	No brand interactivity	3.06	.89	152
	Brand interactivity	3.18	.88	147
	Total	3.12	.88	299
Total	No brand interactivity	2.99	.889	295
	Brand interactivity	3.25	.97	281
	Total	3.11	.94	576

Table 2.5: ANCOVA table brand attitude

	Type III sum of Squares	Df	Mean square	F	Sig	Partial Eta squared
Corrected Model	45.741	4	11.435	14.173	<.001	.090
Intercept	165.313	1	165.313	204.894	<.001	.264
Covariate Attitude ad stimulus	33.641	1	33.641	41.695	<.001	.068
Integration	1.960	1	1.960	2.429	.120	.004
Interactivity	14.450	1	14.450	17.910	<.001	.030
Integration X Interactivity	2.681	1	2.681	3.322	.069	.006
Error	460.696	571	.807			
Total	6094.000	576				
Corrected Total	506.438	575				

The interaction effect between integration and interactivity on brand attitude is marginally significant $F(1, 571) = 3.32, p = .069$ (Figure 2.3). Simple effects analysis indicates that the brand-interactive and integrated stimulus ($M = 3.15$) does not lead to a significantly more positive brand attitude than the non-interactive integrated stimulus ($M = 2.97$) ($p = 0.223$). A non-integrated and brand-interactive stimulus ($M = 3.41$) leads to a significantly more positive brand attitude than a brand-interactive and integrated stimulus ($p = .019$). A non-integrated and non-brand-interactive stimulus ($M = 2.95$) only leads to a marginally significantly more brand attitude ($p = .080$). Hypothesis 2c is not supported. (brand ($p = .080$)).

Figure 2.3: Two-way interaction between integration and interactivity on brand attitude

4.3 Sharing personal data

To investigate the effect of brand integration and interactivity on the sharing of personal data, a 2 (integration) x 2 (brand interactivity) ANCOVA was performed with the number of shared data (0-4) as the dependent and the attitude towards the stimulus as a covariate (see table 2.6 for descriptives and table 2.7 ANCOVA table). There is a significant positive effect of the covariate on information sharing ($F(1, 571) = 26.35, p < .001$). Neither the main effect of integration ($F(1, 571) = 0.62, p = .432$), nor the main effect of interactivity ($F(1, 571) = 1.81, p = .179$) is significant. The interaction effect between integration and interactivity is not significant $F(1, 571) = 2.08, p = .150$, and neither are any of the relevant simple effects (all $p > .05$). Hypotheses 3a,b,c are thus not supported.

Table 2.6: Mean and standard deviations for personal data sharing

Brand integration	Brand interactivity	Mean	SD	N
No brand integration	No brand interactivity	1.49	1.57	143
	Brand interactivity	1.77	1.63	134
	Total	1.62	1.60	277
Brand Integration	No brand interactivity	1.74	1.49	152
	Brand interactivity	1.65	1.60	147
	Total	1.69	1.55	299
Total	No brand interactivity	1.62	1.53	295
	Brand interactivity	1.71	1.61	281
	Total	1.66	1.57	576

Table 2.7: ANCOVA table personal data sharing

	Type III sum of Squares	Df	Mean square	F	Sig	Partial Eta squared
Corrected Model	69.172	4	17.293	7.306	<.001	.049
Intercept	4.866	1	4.866	2.056	.152	.004
Covariate Attitude ad stimulus	62.374	1	62.374	26.353	<.001	.044
Integration	1.464	1	1.464	.619	.432	.001
Interactivity	4.292	1	4.292	1.813	.179	.003
Integration X Interactivity	4.915	1	4.915	2.077	.150	.004
Error	1351.488	571	2.367			
Total	3014.000	576				
Corrected Total	1420.660	575				

4.4 The mediating role of awareness of selling intent, critical processing and brand attitude

To test the model in Figure 2.1, Hayes' PROCESS macro (2013) model 6 was used with 5.000 bootstrap samples. The attitude towards the stimulus was used as a covariate. Two models were tested, one with brand integration as the independent variable and one with interactivity as independent variable and the sharing of personal information as the final outcome in each model. In addition to the hypothesized paths, all other paths between the constructs in the model were also estimated. Tables 2.8 and 2.9 show the descriptives of the mediators across the interactivity and integration conditions respectively.

Table 2.8: Mean and standard deviations for three mediators and the dependent variable in the model with interactivity as independent variable

Mediators	Experimental condition	Mean	SD
Selling intent	Interactive ad formats	3.16	1.39
	Non-interactive ad formats	2.93	1.40
	Total	3.05	1.40
Critical processing	Interactive ad formats	2.74	0.92
	Non-interactive ad formats	3.00	0.86
	Total	2.87	0.90
Brand attitude	Interactive ad formats	3.25	0.97
	Non-interactive ad formats	2.99	0.89
	Total	3.11	0.94
Sharing of personal data	Interactive ad formats	1.71	1.61
	Non-interactive ad formats	1.62	1.53
	Total	1.66	1.57

Table 2.9: Mean and standard deviations for three mediators and the dependent variable in the model with integration as independent variable

Mediators	Experimental condition	Mean	SD
Selling intent	Integrated ad formats	2.99	1.43
	Non-integrated ad formats	3.10	1.37
	Total	3.05	1.40
Critical processing	Integrated ad formats	3.80	0.86
	Non-integrated ad formats	2.95	0.93
	Total	2.87	0.90
Brand attitude	Integrated ad formats	3.12	0.88
	Non-integrated ad formats	3.11	0.99
	Total	3.11	0.94
Sharing of personal data	Integrated ad formats	1.69	1.55
	Non-integrated ad formats	1.62	1.60
	Total	1.66	1.57

Chapter 2: Integration and interactivity

There is a significant positive effect of brand interactivity on awareness of selling intent of the stimulus ($b = .246, p = .036$). Hypothesis 4a is supported. There is no significant effect of brand integration on awareness of selling intent of the stimulus ($b = -.166, p = .175$). Hypothesis 4b is rejected. Awareness of selling intent has a negative effect on critical processing ($b = -.060, p = .030$). Hypothesis 5 is not supported. Critical processing has a negative effect on brand attitude ($b = -.309, p < .001$). Hypothesis 6 is supported. As expected in hypothesis 7, brand attitude has a positive effect ($b = .389, p < .001$) on personal data sharing. See Tables 2.10 and 2.11 for detailed results. The effect of brand interactivity on personal data sharing is fully mediated, since the direct effect of brand interactivity on the sharing of personal data is not significant ($b = -.049, p = 0.693, CI [-0.2978, 0.1980]$) (Zhao, Lynch Jr, & Chen, 2010).

Table 2.10: Serial mediation model with three mediators – effect of brand interactivity on personal data sharing

	Consequent											
	M ₁ (Selling intent)			M ₂ (Critical processing)			M ₃ (Brand attitude)			Y (Personal data sharing)		
Antecedent	Coeff.	SE	p	Coeff	SE	p	Coeff	SE	p	Coeff	SE	p
X (Interactivity)	0.246	0.117	0.036	-0.292	0.071	<0.001	0.179	0.072	0.013	-0.049	0.126	0.693
M₁ (Selling intent)	—	—	—	-0.060	0.028	0.030	0.093	0.028	0.001	-0.009	0.042	0.819
M₂ (Critical processing)	—	—	—	—	—	—	-0.309	0.050	<0.001	-0.273	0.076	<0.001
M₃ (Brand attitude)	—	—	—	—	—	—	—	—	—	0.389	0.074	<0.001
Constant	2.741	0.174	<0.00	3.767	0.128	<0.001	3.322	0.249	<0.001	0.912	0.428	0.033
Attitude towards the ad stimulus	0.033	0.026	0.196	-0.102	0.016	<0.001	0.056	0.017	0.001	0.068	0.028	0.016
	$R^2 = 0.0098$			$R^2 = 0.101$			$R^2 = 0.177$			$R^2 = 0.131$		
	$F(1, 574) = 2.856, p = 0.058$			$F(1, 573) = 21.811, p < 0.001$			$F(1, 572) = 27.276, p < 0.001$			$F(1, 571) = 21.701, p < 0.001$		

Table 2.11: Indirect effects of serial mediation with three mediators of brand interactivity on personal data sharing

	Indirect effect	[95% CI]
IAC → SI → personal data sharing	-0.0008 (0.0036)	[-0.0098, 0.0055]
IAC → SI → Critical processing → personal data sharing	0.0013 (0.0010)	[0.0001, 0.0049]
IAC → SI → brand attitude → personal data sharing	0.0029 (0.0017)	[0.0005, 0.0078]
IAC → SI → Critical processing → brand attitude → personal data sharing	0.0006 (0.0005)	[0.0000, 0.0021]
IAC → Critical processing → personal data sharing	0.0258 (0.0095)	[0.0107, 0.0484]
IAC → Critical processing → brand attitude → personal data sharing	0.0114 (0.0040)	[0.0053, 0.0212]
IAC → Brand attitude → personal data sharing	0.0225 (0.0104)	[0.0053, 0.0467]

Note: Unstandardized B-coefficients (with boot SE between parentheses); CI = confidence interval using 5.000 bootstrap samples. Significant indirect effects are in bold. IAC stands for ‘interactivity’, SI stands for ‘selling intent’

5 Conclusion and discussion

Brand interactivity of advertising formats enhances young teenagers’ recognition and memory of brand-related information, whereas integrating brand information into media content lowers it. Brand-related information is memorised best if the stimulus is brand-interactive but not integrated into other media content. Brand attitude is positively influenced by brand interactivity, whereas there is no effect of brand integration on brand attitude. Brand attitude is most positive after exposure to an interactive, non-integrated banner. No direct effects of brand interactivity and integration were found on personal data sharing. Brand interactivity leads to more awareness of selling intent which, in turn, leads to less critical processing of the stimulus. More critical processing leads to more negative brand attitude. A more positive brand attitude leads to more personal information sharing.

The memory results are in line with the Limited Capacity model of Attention (Kahneman, 1973) and the Limited Capacity Model of Mediated Message Processing (Lang, 2000) and with the previously found positive effects of brand interactivity on memory of brand information (van Reijmersdal et al., 2012; van Reijmersdal et al., 2010). The combination of brand interactivity

and non-integration reinforces memory effects. Overall, the results show that brand interactivity rather than brand non-integration has the strongest effect on memory.

This strong effect of brand interactivity rather than brand integration also shows in the brand attitude results. This is in line with the study of van Reijmersdal et al. (2010) who found that interactivity of product placement resulted in more positive brand image compared to non-interactive brand placement. Contrary to our expectations, there was no positive effect of brand integration on brand attitude. Previous studies have also found that a high level of brand integration into an entertaining context can lead to more negative attitudes (Dens, De Pelsmacker, Wouters, & Purnawirawan, 2012; Kinard & Hartman, 2013; van Reijmersdal, 2009). This negative effect that also partly shows in our results can be attributed to the strong prominence of the placed brand information in the games (Gupta & Lord, 1998). Brand placement is considered to be prominent if the brand is part of the game play or placed in the focal viewing area (Terlutter & Capella, 2013). This was the case in our experiment. An increase in placement prominence might result in the activation of negative feelings as the game player starts wondering why the placed element is presented in such a prominent manner (Cowley & Barron, 2008; van Reijmersdal, 2009).

No effects of brand integration and interactivity were found on personal data sharing. A potential explanation is that actual sharing of personal information depends more on personality traits such as risk aversion, privacy concern etc. rather than on the specific characteristics of a certain stimulus.

The results of our study show that interactivity leads to higher awareness of selling intent. The active control the individual has over the interactive stimuli leads to more engagement and involvement, which in turns results in more elaborated processing of the information. Surprisingly, no effect of brand integration on awareness of selling intent was found. Brand integration had a negative effect on memory. This might explain why no effect on awareness of selling intent was found. Future research should investigate this further.

It was hypothesized that awareness of selling intent of a stimulus would lead to more critical processing (Boerman et al., 2014; Friestad & Wright, 1994). However, the results of our study show the opposite, namely that awareness of selling intent has a negative effect on critical processing, or put the other way around, a positive effect on perceived appropriateness. The activation of awareness of selling intent might indeed lead to an evaluation of the

appropriateness of the advertising tactics used, as a means of trying to cope with the advertiser's intentions (Friestad & Wright, 1994; Wright et al., 2005). Perceptual appropriateness refers to associations of particular characteristics that activate mental schema (Babin, Chebat, & Michon, 2004). If an individual's awareness of selling intent is activated (s)he will take the different elements that are present in the advertisement into consideration and the individual will perceive the presence of brand information as appropriate within the mediated environment because he or she understands the persuasive and commercial purpose behind the advertisement. As a consequence the individual might perceive the commercial message as appropriate within a particular context. It seems that even if the respondents in our study were aware of the selling intent, they did not become critical towards the brand in the ad. This means that coping with a persuasive attempt after being exposed to a commercial message does not necessarily lead to the development of critical processing. Indeed, as the persuasion knowledge model (Friestad & Wright, 1994) describes coping does not mean becoming critical or negative, but might also refer to accepting the message or finding the message appropriate given the context it appears in. Consequently, if youngsters are aware that an advertiser is trying to sell a product to them, this will not automatically lead to a more critical or negative view towards the ad and the advertiser. This finding is contrary to the results of Boerman, van Reijmersdal & Neijens (2012, 2014). However, Avramova, De Pelsmacker, and Dens (2018) also found that activation of persuasion knowledge does not always lead to more critical processing. Moreover, Evans and Park (2015) question the traditional Persuasion Knowledge Model and pose that even if persuasion knowledge is activated, this might not always lead to negative attitudes. If an individual is exposed to advertising, but this exposure has resulted in a positive experience, this positive evaluation might become associated with the advertisement, leading eventually to positive, rather than negative attitudes (Evans & Park, 2015). Hence, persuasion knowledge does not necessarily lead to critical processing.

In line with Boerman, van Reijmersdal and Neijens' study (2012, 2014), more critical processing has a negative effect on brand attitude. All in all, in the current study awareness of selling intent does not result in detrimental effects, but instead leads to a more positive brand attitude and more sharing of personal information.

6 Managerial and public policy implications

Our results are relevant for advertising practitioners and public policy. Making a stimulus brand-interactive is essential for enhancing brand information memory and brand attitude in young teenagers and brand integration tends to have negative effects in terms of memory. Contrary to the assumptions of the Persuasion Knowledge Model, in the target group of young teenagers studied here, this does not lead to more critical processing, but rather the opposite: once a stimulus is recognised as advertising, the presence of brand information is perceived as appropriate, resulting in a positive attitude and more personal data sharing with the advertiser. Advertisers to this target group are thus advised to not try to ‘hide’ their commercial intent, but rather make it as clear as possible. Finally, our results may also make advertisers more aware of the vulnerability of teenagers and the effects of new advertising formats on them.

Our results show that even a short interactive exposure to information about a fictitious brand has a distinct effect on what they remember and how they feel about the brand. Across conditions, scores on the awareness of selling intent and critical processing barely reach the scale midpoint, indicating that the young teenagers in our study only developed a moderate persuasion knowledge level. Public policy makers should be aware of these profound effects on young teenagers in order to establish guidelines, policies and regulations to make minors aware of and protect them from implicit persuasion by interactive and integrated advertising formats. It is generally assumed that, from the age of 12 onwards, teenagers are ‘advertising literate’. However, this may not be the case for contemporary online advertising formats. In our sample, one in four participants share their personal data in exchange for a chance to win the advertised fictitious smartphone. The number of children and teenagers who share personal information with advertisers may even be higher if the brand, the advertisers, the game or the website is known and familiar (Shin et al., 2012). In order to educate and inform children to become well-informed and critical consumers, media- and advertising literacy education should be further encouraged (Nelson, 2016).

7 Limitations and further research

A limitation of the experimental stimuli used is that the smartphone brand was a fictitious, non-existing brand. Previous research had found that brand recall and recognition are higher for familiar brands than for non-familiar ones (Nelson, 2002; Nelson et al., 2006). Future research

should include familiar brands to explore the potentially different effects of novel advertising stimuli on new versus existing brands.

This study only investigated explicit memory effects. As integrated advertising formats are created to deliver a persuasive message in a subtle way, it is relevant to study implicit memory effects as watching advertising is not the main purpose of surfing on the internet or playing a game (Yeu et al., 2013), and implicit memory measurements could take into account the effects of non-intended advertising exposure (Peters & Leshner, 2013).

The participants were asked to read the information on the website attentively. However, consumers often try to avoid online advertising, (Yeu et al., 2013), especially banners (*banner blindness*) (Cho, 2004). As a result, it is less likely that children and teenagers will click consciously on an online banner in a real life situation, if they are not specifically searching for particular information about a product or a brand. Our results should therefore be corroborated in a real-life context.

The level of interactivity of the banner and the advergaming stimuli used in our experiment differs. For instance, playing an advergaming poses different cognitive challenges compared to clicking on a banner (although interactivity in our study was simply defined as being clickable). This might affect the activation of persuasion knowledge. One can for instance argue that persuasion knowledge activation will occur more automatically when confronted with a clickable banner compared to when a teenager is playing a game. Future research should explore this.

The participants in our study were only once exposed to a stimulus. As the purpose of in-game advertising and advergaming is to promote a brand, playing the games repeatedly is encouraged (Terlutter & Capella, 2013). Therefore, the effects of repeated exposure to integrated advertising formats on consumer responses should be further investigated.

We did not find any effects of the advertising formats studied on the sharing of personal data. A potential explanation is that personal data sharing depends more on personality traits such as risk aversion and privacy concern rather than on the characteristics of a stimulus. Future research should investigate which factors are the main drivers for children and teenagers to share personal information.

One of the answer options concerning the sharing of personal data was that the participants could indicate that they did not want to provide this information. This answer option contained a message that informed the participants that if they wanted to share this information, they could not win the advertised smartphone. In a real life setting this notification is not present. Future research could investigate whether the inclusion of such a notification indeed affects young teenagers' personal data sharing with advertiser.

Integration had no effect on awareness of selling intent. Future research should investigate this further.

For (young) teenagers, a smartphone is a highly involving product. Future research could investigate to what extent effects on brand attitudes, memory and sharing of personal information differs between high and low involvement products.

8 Appendices

8.1 Appendix: Overview of stimuli used in the different experimental conditions

Condition 1: Advergame for the smartphone brand (integrated ad & interactive ad)

Non-integrated ad for rollercoaster

Interactive game board advergame smartphone

128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	64 GB €199
64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199
256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399
128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299
128 GB €299	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199	128 GB €299	256 GB €399	64 GB €199

DELTA 1:08 SMART CRUSH GAME

Condition 2: Advergame for the roller coaster (integrated ad & non-interactive ad)

Non-integrated ad for smartphone

Interactive game board advergame amusement park

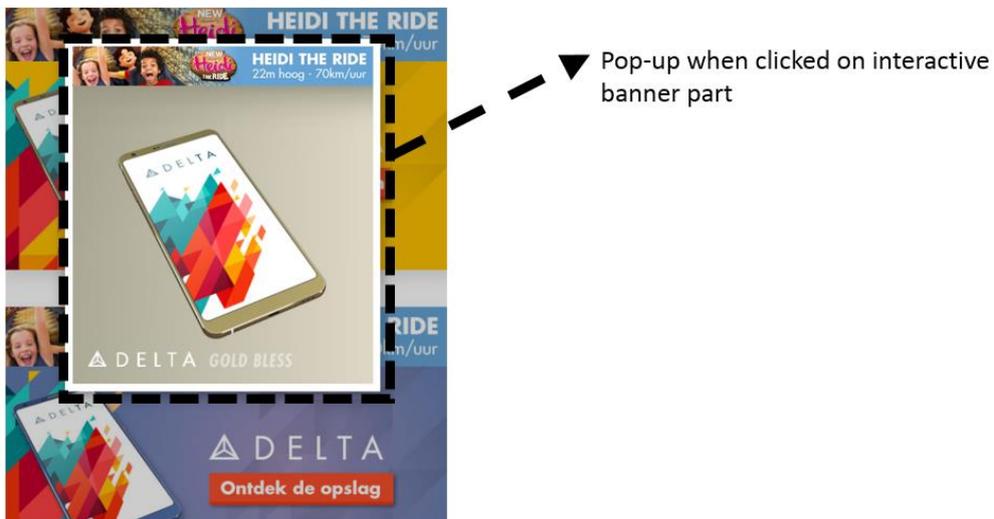
22m 70km/u									
22m 70km/u									
22m 70km/u									
22m 70km/u									
22m 70km/u									

DELTA HEIDI THE RIDE 1:10 SMART CRUSH GAME

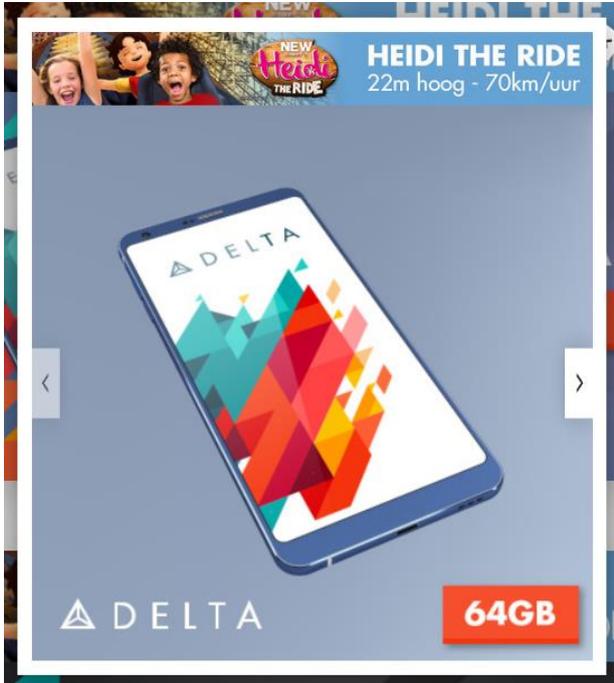
Condition 3: Interactive banner for the smartphone brand - interactive banner about smartphone colour.



An example of pop-up appearance when clicked on the banner about the smartphone colour.



Pop-up about smartphone capacity (64 GB) in detail



Condition 4: Interactive banner for the roller coaster



8.2 Test survey

Test survey to practice how a question in the survey can be answered.

Explanation given to the students: First we will practice how you can answer the survey questions. If something is not clear, please raise your hand and tell me what is not clear. Click on the two arrows in the red square to go to the question.

Example in Dutch

We gaan eerst het beantwoorden van de vragen even oefenen. Druk nu op de twee pijltjes ">>" rechts onderaan om verder te gaan.



Question 1: Wat is your favourite dish? You can only chose one answer of this list of six.

- Pizza
- French fries
- Spaghetti
- Ice cream
- Lasagna
- Pita

Explanation given to the students: In this question you can only indicate one answer options. You can recognise this by means of the round bullets before each answer option. For every question in the survey, you can continue and go the next question by means of clicking on the two arrows in the red square. This is

Question 2: Which of the following social media do you use? You can indicate more than one answer option if this is applicable to you.

- YouTube
- Smartschool
- Facebook Messenger
- Whatsapp
- Instagram
- Snapchat
- Twitter.

Explanation given to the students: In this question you can indicate more than one answer option if this is applicable to you. You recognise that you can indicate more than one answer option by means of the squares before each question.

Question 3: Which of the following social media do you like **the most? Notice, the you can select only two or less answer options out of the list!**

- YouTube
- Smartschool
- Facebook Messenger
- Whatsapp
- Instagram
- Snapchat
- Twitter.

Explanation given to the students: In this question you can indicate more than one answer option if this is applicable to you. However, you can only indicate a maximum of two answer options. In what follows we will see what happens if you indicate more than one 2 answer options to this question. Now, let's indicate three answer options out of the list.

What happens if you indicate more than two answer options? (pupil answers this questions).

Example in Dutch:

Beantwoord maximaal 2 antwoord keuze(s).

Welke van deze dingen gebruik je het liefst? Let op! je kan hier maar 2 dingen aanduiden.

- YouTube
- Smartschool
- Facebook messenger
- Whatsapp
- Instagram
- Snapchat
- Twitter

>>

Explanation given to the students: Indeed, if you indicate more than two answer options, a red text appears indicating that you can only indicate two or less answer options to this question in order to be able to continue to the next question. So, make sure you can click on the arrow to continue to the next question.

Question 4: Read the sentence in the table on the left and indicate the smiley that fits most to your answer.

	I don't like it at all	I don't like it	Neutral	I like swimming	I like swimming a lot
					
How much do you like swimming?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Explanation given to the students: As you will have noticed, the answer options contains emoticons, and each emoticon has its own meaning. Each emoticon thus stands for an answer option. Is this clear for everyone? Does anyone has a question?

So, now we have practiced in group how you can indicate an answer option to the questions. This was only a small exercise. In what follows the question apply to yourself and what you will see.

8.3 Actual survey

Start screen

If you click on the arrows, you will be redirected to a website. Read the information on the website. If you see something clickable on the website, you can click on this as well.

Questions after exposure to the website with measurement between brackets:

Question 1:

Read the sentence in the left part of the table and indicate the emoticon that is applicable to your answer.

(Attitude towards the ad stimulus)

	I don't like it at all	I do not like it	I don't know	I like it	I like it very much
					
Do you like the website you just saw?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 2:

The website you saw contained information about a smartphone. This website also asks information about you. You can participate in a competition to win the smartphone.

(Personal data sharing)

Date of birth:

- Fill in your date of birth in order to have a chance to win the smartphone
- I do not want to share this information and thus, I cannot win the smartphone.

Favourite colour:

- Fill in your favourite colour in order to have a chance to win the smartphone
- I do not want to share this information and thus, I cannot win the smartphone.

Telephone number:

- Fill in your telephone number in order to have a chance to win the smartphone

- I do not want to share this information and thus, I cannot win the smartphone.
- I want to give my telephone number, but I do not know my telephone number.

Cookies:

May the website follow which other websites you visit in order to have a chance to win the smartphone?

- Yes
- No, I do not want this and thus cannot win the smartphone

Question 3:

The website contained information about a smartphone. What was the name of the smartphone you saw on the website? You can only indicated one answer option from the list below.

(Brand Recognition)

- Samsung
- Zenith
- iPhone
- Delta
- Huawei
- I do not remember the name of the smartphone on the website

Question 4:

About which smartphone characteristics did the website give information? Here you can only indicate a maximum of three smartphone characteristics from the list below.

(Overall memory of all smartphone characteristics on the website)

- Shape
- Colour
- In which store available
- Quality of the camera
- Matching smartphone covers
- Screen size
- Battery life
- Memory capacity
- Price
- I did not receive information about the characteristics of the smartphone

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Question 5:

Which smartphone colours did you see? Here you can only indicate a maximum of three smartphone colours from the list below.

(Memory smartphone colour)

- Red
- Black
- Blue
- Gold
- Orange
- Purple
- I did not receive information about the colours of the smartphone

Question 6:

Which smartphone prices did you see? Here you can only indicate a maximum of three smartphone prices from the list below.

(Memory smartphone price:)

- €99
- €199
- €299
- €399
- €499
- €599
- I did not receive information about the smartphone price

Question 7:

Which smartphone memory capacity (Gigabyte – GB) did you see? Here you can only indicate a maximum of three answer options from the list below.

(Memory smartphone memory capacity)

- 8 GB
- 16 GB
- 32 GB
- 64 GB
- 128 GB
- 256 GB
- I did not receive information about the smartphone memory capacity

Question 8:

The name of the smartphone you saw on the website is Delta. Read the sentence in the left part of the table and indicate the emoticon that is applicable to your answer.

(Brand attitude)

	I don't like it at all	I do not like it	I do not know	I like it	I like it very much
					
-Do you like Delta, the smartphone you saw on the website?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 9:

Indicate the answer option with the colour 'blue'.

Red



Yellow



Blue



Green



Black



(Attention check)

Question 10:

Does the website you just saw want to make you have the Delta smartphone? Indicate the emoticon that is applicable to your answer.

(Awareness of selling intent)

No, definitely not	No, I do not think so	I do not know	Yes, I think so	Yes, definitely
				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Question 11:

Read the sentences in the table below and indicate the answer option that is applicable to your answer for each sentence.

- While being on the website,...

(Critical processing)

	Totally disagree	Disagree	I do not know	Agree	Totally agree
... I rather found it annoying that the Delta smartphone appeared	<input type="radio"/>				
... I found the information about the Delta smartphone strange	<input type="radio"/>				
... I found the Delta smartphone not appropriate in the website context"	<input type="radio"/>				

End of the survey

Debriefing in class

8.4 Parental consent form in Dutch



datum

Betreft: uitnodiging deelname onderzoek over reclame bij tieners

Beste ouder
Beste voogd,

Uw kind wordt uitgenodigd deel te nemen aan een onderzoek dat wordt uitgevoerd door het departement Marketing, faculteit Toegepaste Economische Wetenschappen van de Universiteit Antwerpen.

In functie van een onderzoek naar reclamewijsheid bij kinderen zijn wij specifiek op zoek naar leerlingen uit het 1^e en 2^{de} middelbaar om deel te nemen aan onze studie. Doel van het onderzoek is om de effecten van verschillende reclamevormen op tieners na te gaan om inzicht te krijgen in de kennis van tieners over reclame, en om hen hierover in de toekomst beter te kunnen informeren. Het onderzoek heeft in geen enkele zin betrekking op schoolprestaties van uw kind. Tijdens het onderzoek wordt er geen specifieke kennis of vaardigheden verwacht of getoetst. Er zijn nergens goede of foute antwoorden. Het betreft enkel de mening van uw kind over bepaalde advertentie topics. Het onderzoek maakt deel uit van het AdLit-onderzoeksproject rond reclamewijsheid (www.adlit.be).

Dit onderzoek zal doorgaan tijdens de lessen op **datum**. Tijdens dit onderzoek zullen wij aan uw kind vragen een kort spel op de computer te spelen. Daarna zullen wij hem/haar vragen een korte vragenlijst in te vullen. Het onderzoek duurt circa 15 minuten. Na afloop van het onderzoek volgt er een korte debriefing met de klas van uw kind, in samenwerking met de betrokken leerkracht, waarin meer informatie wordt gegeven over het doel van het onderzoek. Uw kind ontvangt dan ook een bioscoopticket als beloning.

Omdat dit onderzoek wordt uitgevoerd onder de verantwoordelijkheid van het departement Marketing, faculteit Toegepaste Economische Wetenschappen van de Universiteit Antwerpen, heeft u de garantie dat:

1. De anonimiteit van uw kind gewaarborgd is en dat de antwoorden of gegevens onder geen enkele voorwaarde aan derden zullen worden verstrekt.
2. U en/of uw kind kunnen weigeren om mee te doen aan het onderzoek of kunnen de deelname afbreken zonder het opgeven van redenen.

Wij hopen u hiermee voldoende geïnformeerd te hebben en danken u bij voorbaat voor uw toestemming voor de deelname van uw kind aan dit onderzoek.

Mogen wij u vragen onderstaand strookje in te vullen, te handtekenen en terug mee te geven met uw kind vóór **datum**?

Chapter 2: Integration & interactivity

Alvast bedankt voor uw medewerking.
Met vriendelijke groet,

Kristien Daems – onderzoekster Universiteit Antwerpen (kristien.daems@uantwerpen.be)
Prof. dr. Patrick De Pelsmacker – promotor van dit onderzoek bij Universiteit Antwerpen (patrick.depelsmacker@uantwerpen.be)
Prof. dr. Ingrid Moons – promotor van dit onderzoek bij Universiteit Antwerpen (ingrid.moons@uantwerpen.be)
Departement Marketing, Faculteit Toegepaste Economische Wetenschappen, Universiteit Antwerpen

Indien u nog vragen heeft omtrent dit onderzoek of uitnodiging tot deelname aarzelt dan niet om ons te contacteren via de e-mailadressen hierboven.

Meer informatie omtrent het project kan u vinden op volgende website: www.AdLit.be



Ik, ouder/voogd van,
uit.....(klas) van het *1^{ste}/2^e middelbaar
van NAAM SCHOOL,

.....
verklaar hierbij te zijn ingelicht over de aard en methode van het onderzoek, zoals uitgelegd in de uitnodigingsbrief voor het onderzoek 'Reclame bij tieners'.

*schrappen wat niet past/aanduiden wat past

Ik verleen*

- vrijwillige toestemming voor deelname van mijn kind aan dit onderzoek.
- GEEN toestemming voor deelname van mijn kind aan dit onderzoek.

*aanduiden wat past.

Als de onderzoeksresultaten gebruikt zullen worden in wetenschappelijke publicaties, of op een andere manier openbaar gemaakt worden, dan zal dit volledig anoniem gebeuren. De persoonsgegevens van mijn kind worden niet door derden ingezien zonder mijn uitdrukkelijke toestemming.

Als ik meer informatie wil, nu of in de toekomst, dan kan ik contact opnemen met Kristien Daems (Kristien.Daems@uantwerpen.be).

Datum:

.....

....

Handtekening:.....

Chapter 3

The effect of personalised advertising, an advertising cue, and youngsters' age on awareness of selling intent and word-of-mouth intention¹

¹ An earlier version of this chapter was presented at the 2018 Etmaal van de communicatiewetenschap conference in Ghent, Belgium.

Chapter 3 The effect of personalised advertising, an advertising cue, and youngsters' age on awareness of selling intent and word-of-mouth intention

Abstract

The study explores the effect of advertising personalisation on Facebook and the moderating role of an advertising cue and age, on youngsters' awareness of selling intent and word-of-mouth (WOM) intention, by means of a 2X2X2 between-subjects experiment among 167 participants aged 9-13 years. When an advertising cue is present, awareness of selling intent is higher when the ad is personalised than when it is not personalised. No main effect of the presence of a cue was found on WOM intention. Furthermore, if no cue is present, there is no difference between personalised and non-personalised ads on awareness of selling intent and WOM intention. Ad personalisation results in a higher awareness of selling intent and higher WOM intention among 5th graders, but not among 7th graders. The presence of an advertising cue results in a higher WOM intention among 5th graders, but does not have an effect on 7th graders. Implications for theory and the stakeholders involved in advertising to youngsters are offered.

1 Introduction

Advertising aimed at youngsters 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). 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 & Haenlein, 2010, p. 63 p. 63). SNSs are not only used by adults, but are also very popular among children and teenagers (Ofcom, 2016). In January 2018, Facebook was the most often used social networking site worldwide with 2.167 billion active users (Statista, 2018). 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 and they admit to circumvent the age rule by indicating an incorrect age on their profile (Livingstone et al., 2014). Moreover, Facebook is the most popular social networking site among American teenagers

(aged 13-17) (Pew Research Center, 2015). Also in Europe, Facebook is popular among both children and teenagers (Livingstone et al., 2014). In the United Kingdom, for example, 23% of the children between 8 and 11 and 72% of teenagers between 12 and 15 have a Facebook profile (Ofcom, 2016). In Flanders (Belgium), 38% of the youngsters between 9 and 12 years old are active on Facebook (Apestaartjaren, 2016) and 64% of them logs in on a daily basis.

SNSs are advertising-funded. Facebook reports almost 40 billion dollars in advertising revenue in 2017 (Facebook Inc, 2017). In order to deliver their commercial message to the right person, advertisers on SNSs are able to adapt their messages to consumers' interests, preferences and characteristics which are provided via users' personal profiles (Bright & Daugherty, 2012; Kelly et al., 2010; Taylor, 2013). This technique is called personalisation of advertising, defined as *'advertising that is tailored to an individual's characteristics and/or interests'* (De Keyzer, Dens, & De Pelsmacker, 2015 p. 125). Although consumer responses to personalised advertising aimed at adults has been studied extensively (e.g. De Keyzer et al., 2015; Tucker, 2014; Van Noort, Antheunis, & Verlegh, 2014), its effect on children and teenagers has received scant attention in academic literature (e.g. van Reijmersdal, Rozendaal, Smink, van Noort, & Buijzen, 2016; Zarouali, Poels, Walrave, & Ponnet, 2018). The first objective of the current study is to investigate youngsters' responses to personalised advertising on a SNS.

In contrast to traditional advertising (e.g. a 30-second ad on television), more novel advertising formats often embed a commercial message into an entertaining and/or social context (Terlutter & Capella, 2013). For instance, advertising on SNSs is integrated in the other content created by someone's connections on the SNS (Boerman, Willemsen, et al., 2017). Moreover, advertising that appears in the News Feed of for instance Facebook or LinkedIn as 'sponsored content' is native as it looks like posts of other connections within someone's social network (Boerman, Willemsen, et al., 2017; Wojdyski & Evans, 2016). As a result, it is hard to recognise the embedded message as advertising, even more so for children and teenagers than for adults (Panic et al., 2013). In order to help consumers identify advertising and distinguish it from mediated content, advertising cues can be used (An & Stern, 2011). Cues are messages that function as a break between the editorial content and the advertising message and that allow viewers to recognise a message as 'advertising' (An & Stern, 2011; Wright et al., 2005). For example, on television, an advertising block is announced by a voice-over *'we will be back after the commercial break'* or by means of a message appearing on screen. Compared to adults, youngsters lack advertising experience and cognitive skills to identify or recognise advertising and to understand its commercial and persuasive intent (Brucks et al., 1988; Moses & Baldwin,

2005; Rozendaal et al., 2010). Therefore, clearly announcing advertising, especially when it is personalised and in an online integrated content, is important when targeting children. The current study uses a clear, conspicuous advertising cue. Our second objective is to explore the moderating role of such an advertising cue on the responses of youngsters to personalised advertising on a SNS.

The Persuasion Knowledge Model describes the necessary skills and knowledge to be able to cope with advertisers' attempts (Friestad & Wright, 1994). This knowledge develops gradually during childhood and requires cognitive capacities and some experience with advertising. Based on this model it is argued that childhood consists of several stages (each with a corresponding age group) and that older children have acquired more insight and advertising knowledge (John, 1999; Roedder, 1981; Wright et al., 2005). The fact that advertising knowledge and persuasion knowledge develop throughout different stages in childhood, shows that age is an important factor for the responses of children to (online) advertising. The third objective of the current study is to explore the moderating effect of children's age on their responses to personalised advertising and an advertising cue.

Contemporary online advertising formats focus primarily on eliciting behavioural activation such as word-of-mouth (WOM) intention instead of focusing on evaluative responses such as brand attitudes (Geuens & De Pelsmacker, 2017). However, most studies on advertising targeted at youngsters so far focus on evaluative responses instead of taking behavioural actions into account (De Pauw, Hudders, & Cauberghe, 2017; van Reijmersdal et al., 2016). In the current study, we use awareness of selling intent and WOM intention as outcome variables of personalised advertising (De Keyzer et al., 2015; Geuens & De Pelsmacker, 2017). Awareness of selling intent (i.e. 'the advertiser tries to sell the product to me') is a cognitive evaluation that can be triggered by advertising knowledge. This outcome variable is crucial in the context of integrated and personalised advertising aimed at youngsters because of their limited advertising literacy. If individuals are aware of the selling intent of a message, they can cope with advertisers' persuasive attempts (Boush, Friestad, & Rose, 1994). Word-of-mouth refers to information consumers obtain from interpersonal sources such as friends and family (Chu & Kim, 2018; Gilly, Graham, Wolfenbarger, & Yale, 1998) and is thus an important online advertising outcome (Feick & Price, 1987).

Our study is conducted in a group of young Belgian youngsters aged 9-13, and has several theoretical contributions. First, it examines the effect of integrated personalised advertising

aimed at children and teenagers on a social networking site, a topic that has only received scant attention in academic literature. Second, research on advertising cues has mainly focused on advergames (An & Kang, 2013, 2014), product placement in movies and television shows (De Pauw, Hudders, et al., 2017; Tessitore & Geuens, 2013; van Reijmersdal, Boerman, Buijzen, & Rozendaal, 2017), or native advertising in the specific context of news (Wojdynski et al., 2017; Wojdynski & Evans, 2016), but has barely focused on social networking sites (Boerman, Willemsen, et al., 2017). Third, only a few studies have investigated the effect of integrated online advertising on different age groups of children and young teenagers (9-13 years) while they are in a crucial stage of developing persuasion knowledge and consumer socialisation (John, 1999; Wright et al., 2005).

This study informs the existing debate about the effects of advertising targeted at children and teenagers in the context of SNSs, and can inform public policy about the effects of native advertising practices and personalisation as an advertising technique aimed at minors, and how to cope with them.

2 Literature review and hypotheses

2.1 Personalisation of advertising aimed at youngsters

Advertisers increasingly collect information from youngsters on SNSs and this information is used intensively for personalised advertising (van Reijmersdal et al., 2016). Since consumers are not always aware of this advertising technique and of the fact that the information on SNSs is used for other purposes than the users' original intentions (building a social network) (Kaplan & Haenlein, 2010), concerns about this practice have been raised (Taylor, 2013; Tucker, 2014). This is especially the case when advertising personalisation is based on information about minors. A study with teenagers between 13 and 17 years old revealed that the vast majority of them are not aware that the personal information they disclose on their SNS profile is used for advertising purposes (Kelly et al., 2010). Moreover, they believe that if their profile was set as 'private' no one else could access their personal data (Kelly et al., 2010).

Research among adolescents and adults shows that personalisation of advertising on SNSs can lead to positive ad responses (Cho, 2004; De Keyzer et al., 2015; Walrave, Poels, Antheunis, Van den Broeck, & van Noort, 2016). For example, De Keyzer et al. (2015) found that perceived personalisation increases perceptions of personal relevance, which in turn leads to a better

attitude toward the brand and higher click intention. In an experimental study with adolescents, Walrave et al. (2016) found that the highest level of personalisation leads to the most positive attitude toward the ad, brand engagement and intentions to forward the ad. The study of van Reijmersdal et al. (2016) is, to our knowledge, the only one that has examined effects and processing of targeted online advertising on SNSs with youngsters between 9 and 13 years old. They used banner advertisements with different background colours (in line with the child's favourite colour) as well as different products (in line with the child's hobbies) in a fictitious social networking profile. Their study shows that a personalised advertisement based on children's favourite hobbies resulted in more positive brand attitudes and higher purchase intentions, but form targeting (the use of different background colours) did not. Nevertheless, the children did not understand the advertising tactic used, because they process it in an uncritical manner. This result shows that advertising techniques such as personalisation are indeed difficult for youngsters to recognise and to understand, and that they are unaware of the intentions behind the message (Panic et al., 2013; van Reijmersdal et al., 2016), but nevertheless result in positive responses towards the brand. In order to protect children from unconscious persuasion by ad personalisation, it should be indicated that a message is advertising, by means of a clear advertising cue.

2.2 The moderating effect of an advertising cue

To fully understand advertising, an individual has to acquire two skills; (1) one has to be able to identify advertising and to distinguish it from editorial or entertaining contexts, and (2) one has to comprehend the commercial and persuasive intentions and techniques of the advertising format (Brucks et al., 1988; Moses & Baldwin, 2005; Rozendaal et al., 2010; Vanwesenbeeck et al., 2016). The latter is more difficult and complicated to acquire than the former (Moses & Baldwin, 2005), especially in the case of integrated advertising targeted at youngsters. Children and teenagers lack knowledge and skills to identify and understand personalised integrated advertising on SNSs and the persuasive and commercial intent behind it (Moses & Baldwin, 2005; Rozendaal et al., 2010).

Importantly, even if youngsters possess advertising and persuasion knowledge, they will not necessarily use this knowledge automatically (Brucks et al., 1988; Panic et al., 2013; van Reijmersdal et al., 2012). Roedder (1981) distinguishes three types of information processing, which corresponds to different ages and developmental stages in childhood based on children's skills of information storage and retrieval. *Limited processors* (younger than 8 years) are not

able to store and retrieve information. *Cued processors* (aged 8-12 years) are able to store and retrieve information but will not do this automatically. They will only use the stored information if they are encouraged to do so, for example by means of a cue or a clear indication (Brucks et al., 1988; Roedder, 1981; van Reijmersdal et al., 2012). *Strategic processors* (aged 13 and older) are able to use their processing and retrieval skills spontaneously without needing the presence of an incentive. An advertising cue (disclosure) will thus help young teenagers (cued processors) differentiate advertising from content (An & Stern, 2011), by activating persuasion knowledge (Brucks et al., 1988; Tessitore & Geuens, 2013; Wei, Fischer, & Main, 2008).

Advertisers are required to inform consumers about the commercial nature of an advertising message by using a disclosure which explicitly states that the post is sponsored by an advertiser (Boerman, Willemsen, et al., 2017; Federal Trade Commission, 2013). However, for a cue to be effective, it must be noticed and it must be clear what it stands for in order to be interpreted and understood in the right manner (Wojdyski et al., 2017; Wojdyski & Evans, 2016). In current practice, the message '*Sponsored*' or '*Sponsored Content*' that accompanies advertising on social networking sites may be far from effective in this respect (Boerman et al., 2012; Boerman, Willemsen, et al., 2017; Wojdyski et al., 2017; Wojdyski & Evans, 2016). This calls for an advertising cue that is clear, visually prominent, and uses explicit language (Evans, Phua, Lim, & Jun, 2017; Federal Trade Commission, 2013; Wojdyski et al., 2017).

Youngsters aged 9-13 (the target group of our study) are expected to be cued processors and need a recognisable and clear cue to activate their persuasion knowledge (Roedder, 1981). The current study uses such a cue that indicates clearly that a message is advertising. When such a cue is present, we expect that it will have more effect in case of a personalised ad than in case of a non-personalised one. If, due to the presence of an advertising cue, a youngster is made aware of the fact that a message is an advertisement, he or she may notice more easily that the ad is based on his or her personal preferences and interests. As a consequence, this can trigger awareness of selling intent (Baek & Morimoto, 2012; Friestad & Wright, 1994; Simonson, 2005) and trigger more outspoken negative behavioural responses (WOM) than a non-personalised ad (Boerman, Willemsen, et al., 2017; Wojdyski et al., 2017; Wojdyski & Evans, 2016). If no cue is present, we do not expect differences in responses to a non-personalised and a personalised one, because the lack of a cue inhibits interpreting and process the message as advertising. We expect:

H1: In the presence of a clear advertising cue, ...

- (a) awareness of selling intent will be higher
- (b) word-of-mouth intention will be lower

for personalised ads than for non-personalised ads.

H2: When a clear advertising cue is absent there will be no difference in

- (a) awareness of selling intent
- (b) word-of-mouth intention

for personalised ads and non-personalised ads.

2.3 The moderating effect of age

Based on the work of Piaget (1960) and Roedder (1981), John (1999) integrates different models of the cognitive development of youngsters in a framework that describes three stages of consumer socialisation of children to ultimately reach an adult level of consumer socialisation. Children in the *perceptual stage* (age 3-7) focus on perceptual attributes only to recognise advertising, such as the duration of a television programme and television commercials (the latter are shorter than the former). Once children reach the *analytical stage* (age 7-11) they have the ability to analyse advertisements on multiple dimensions such as both perceptual features and persuasive intentions behind the commercial (for example, they understand that the purpose behind advertising is to have people buy the advertised product). From the *reflective stage* onwards (age 11-17) youngsters acquire an adult level of understanding advertising's intentions and advertisers' attempts.

Another theoretical framework that is often used in research about advertising to youngsters is the Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994). This model describes which knowledge, skills and experience an individual needs to be able to cope with advertisers' persuasive attempts. This knowledge, skills and experience develop throughout childhood and adolescence (John, 1999; Moses & Baldwin, 2005; Wright et al., 2005). When a child matures, he or she develops knowledge and understanding of different aspects of advertising, such as recognising advertising as a commercial message, gaining insight in the underlying purpose of the advertiser and the techniques (e.g. personalisation) advertisers use (Friestad & Wright,

1994; Wright et al., 2005). According to consumer socialisation theory, persuasion knowledge starts to develop from the age of 8, and continues to develop further (Boush et al., 1994; John, 1999). Research shows that advertising recognition and understanding of advertiser's tactics progresses from around the age of 10, reaching almost an adult level at the age of 12 (Rozendaal et al., 2010; Rozendaal, Buijzen, & Valkenburg, 2011). We expect that ad personalisation will result in less awareness of persuasive intent and more positive behavioural response in 5th graders because they only have limited understanding of the commercial intent behind this technique and they are considered to be more susceptible to personalisation. As personalisation is based on the interests and preferences of the message receiver, it is expected that a personalised message will be perceived as more appealing. This can result in more positive attitudes towards the advertised brand (van Reijmersdal et al., 2012). Children in the 7th grade, on the other hand, have acquired an adult level of understanding of this advertising technique and may therefore develop a higher level of awareness of selling intent and respond more negatively to personalised advertising:

H3: In children of the 5th grade, a personalised advertisement will lead to...

- (a) a lower awareness of selling intent
- (b) a higher word-of-mouth intention

than a non-personalised advertisement.

H4: In children of the 7th grade, a personalised advertisement will lead to...

- (a) a higher awareness of selling intent
- (b) a lower word-of-mouth intention

than a non-personalised advertisement.

If a person is not aware that a message is advertising or has persuasive intentions, persuasion knowledge may not be activated (Boerman et al., 2012). Therefore, recognition of an advertising message is the starting point of advertising knowledge. The age group of 5th graders are cued processors. Consequently, we expect that, in this group, an advertising cue will lead to a higher awareness of selling intent, and will lower WOM intention. Children in the 7th grade do not necessarily need an advertising cue to recognise advertising and therefore we expect that a cue will not increase their understanding of advertising and hence their responses to it:

H5: In children of the 5th grade, a clear advertising cue will lead to...

- (a) a higher awareness of selling intent
- (b) a lower word-of-mouth intention

than when such a cue is not present.

H6: In children of the 7th grade, a clear advertising cue will not lead to a different

- (a) awareness of selling intent
- (b) word-of-mouth intention

than when such a cue is not present.

3 Method

3.1 Design and stimuli

A 2 (personalisation vs non-personalisation) X 2 (advertising cue vs no cue) X 2 (age/grade: 5th grade (age 9-11 years) vs 7th grade (12-13 years)) between-subjects online experiment was conducted. Participants were exposed to a mocked Facebook page containing a native ad for a fictitious amusement park (*'Coasterland'*) in the News Feed (see appendix 8.1 for stimuli). A fictitious brand was used to exclude potential confounding effects from existing brand attitudes and brand familiarity. An amusement park was chosen since it was expected that it is equally appealing to both boys and girls in the 5th and 7th grade. 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.

Personalisation was manipulated based on participants' answer to one of four questions with six pre-set response options at the beginning of the questionnaire. Respondents had to indicate their favourite colour (filler), favourite food (filler), favourite animal (filler) and favourite television personality. The latter was used to personalise the advertisement. The participants could indicate one television personality out of a list of six (3 males and 3 females). The question contained a picture of each television personality to ensure that the children recognised

them. The television personalities were chosen based on their popularity in a pretest with children aged 10-12 years. In the personalised conditions, the participants were exposed to a native advertisement showing their chosen favourite television personality on the left side of the roller coaster picture (see appendix 8.1). The type of personalisation used in this study is thus personalised celebrity endorsement. In the non-personalised conditions, no picture of a television personality was shown.

The presence of an advertising cue was manipulated by either not adding or adding an advertising cue (placed in the left corner above the advertisement). The advertising cue consisted of an icon holding a panel with red borders containing the message '*reclame*' (the Dutch word for 'advertising') placed in black characters inside the panel (see appendix 8.1). The choice to use a visual cue with one word is based on previous research indicating that a combination of both text and logo is most effective for cue recognition (An & Kang, 2013; An & Stern, 2011; Boerman, Van Reijmersdal, & Neijens, 2015). The age factor was manipulated by selecting participants in both groups (see next section).

3.2 Procedure and sample

Data were collected from three different primary schools and one secondary school in Flanders, Belgium. Prior to the data collection, approval of the schools and active parental consent was obtained by means of signing a consent form (see appendix 8.3). Data were 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 (see appendix 8.2). At the beginning of the survey, four questions with six pre-set response options were posed (filler items and for personalisation manipulation). The choice of the respondents' favourite television personality was followed by a question asking how much the respondents liked their chosen television personality. This was followed by questions about their age and gender. These questions were asked in the middle of the questionnaire to provide enough filler time between the question on which the personalisation would be based and the exposure to the Facebook page containing the advertisement. Next, children were instructed to watch a YouTube-video about fire breathers (duration: three minutes). This video also functioned as a filler item. A timer was set to the video in order to prevent children from skipping or fast forwarding the video. After the video, 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 (personalised ad and presence of a cue, $n=38$; non-personalised ad and presence of a cue, $n=41$; personalised ad and no cue, $n=47$; non-personalised ad and no cue =41). To guarantee that the children looked for a minimum of time to the different elements on the Facebook page, a timer of 15 seconds was set to the Facebook News Feed. After exposure to the stimulus, they were asked questions about WOM intention, the attitude towards the ad, awareness of selling intent and the attitude towards amusement parks in general. After the experiment participants 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.

3.3 Measures

WOM intention was measured by means of one item ranging from No, definitely not – Yes, definitely: *‘Would you tell your friends about this amusement park?’*. Awareness of selling intent was measured with one item ranging from No, definitely not – Yes, definitely: *‘Is advertising on Facebook there to make you buy the advertised product?’* (Rozendaal, Buijzen, & Valkenburg, 2009; Rozendaal, Opre, & Buijzen, 2016). Attitude towards the television personality was measured with one item: *‘How much do you like this television personality?’* ranging from *‘I do not like this television personality at all – I like this television personality very much’*. 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 – I like it very much. Attitude towards the ad was measured by means of 6 items ranging from ‘No, definitely not – Yes, definitely: *‘Do you think the advertisement for Coasterland is funny, beautiful, boring, fantastic, ugly and nice?’* (Pecheux & Derbaix, 1999) (Cronbach’s $\alpha = 0.81$). Attitude towards the television personality, attitude towards the ad and attitude towards amusement parks in general were included as covariates in the analyses. 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 is a commonly used research technique in research with children (Panic et al., 2013).

4 Results

To test our hypotheses, two 2X2X2 ANCOVA's with two-way interaction effects are performed. Personalisation, cue and grade are the independent variables, awareness of selling intent and WOM intention the dependents, with the attitude towards the TV-personality, the attitude towards amusement parks in general and the attitude towards the ad as covariates. The results of the ANCOVA's can be found in table 3.3 for awareness of selling intent and table 3.4 for word-of-mouth intention. An overview of the means, standard deviations and cell sizes for both dependent variables is provided in table 3.1 (awareness of selling intent) and table 3.2 (WOM intention).

Table 3.1: Awareness of selling intent per condition

Personalisation	Cue	Grade	Mean	SD	N
No personalisation	No cue	5 th grade	2.76	1.55	21
		7 th grade	3.70	1.30	20
		Total	3.22	1.49	41
	Cue	5 th grade	2.50	1.38	24
		7 th grade	3.29	1.21	17
		Total	2.83	1.36	41
	Total	5 th grade	2.62	1.45	45
		7 th grade	3.51	1.26	37
		Total	3.02	1.43	82
Personalisation	No cue	5 th grade	3.12	1.53	26
		7 th grade	3.62	1.12	21
		Total	3.34	1.37	47
	Cue	5 th grade	3.67	1.20	21
		7 th grade	3.94	.97	17
		Total	3.79	1.09	38
	Total	5 th grade	3.36	1.41	47
		7 th grade	3.76	1.05	38
		Total	3.54	1.27	85
Total	No cue	5 th grade	2.96	1.53	47
		7 th grade	3.66	1.20	41
		Total	3.28	1.42	88
	Cue	5 th grade	3.04	1.41	45
		7 th grade	3.62	1.13	34
		Total	3.29	1.32	79
	Total	5 th grade	3.00	1.47	92
		7 th grade	3.64	1.16	75
		Total	3.29	1.37	167

Table 3.2: Word-of-mouth intention per condition

Personalisation	Cue	Grade	Mean	SD	N
No personalisation	No cue	5 th grade	3.00	1.45	21
		7 th grade	3.65	1.46	20
		Total	3.32	1.47	41
	Cue	5 th grade	3.63	1.01	24
		7 th grade	3.24	1.03	17
		Total	3.46	1.03	41
	Total	5 th grade	3.33	1.26	45
		7 th grade	3.46	1.28	37
		Total	3.39	1.26	82
Personalisation	No cue	5 th grade	3.69	.928	26
		7 th grade	3.48	1.21	21
		Total	3.60	1.06	47
	Cue	5 th grade	3.86	1.35	21
		7 th grade	2.71	1.40	17
		Total	3.34	1.47	38
	Total	5 th grade	3.77	1.13	47
		7 th grade	3.13	1.34	38
		Total	3.48	1.26	85
Total	No cue	5 th grade	3.38	1.23	47
		7 th grade	3.56	1.32	41
		Total	3.47	1.27	88
	Cue	5 th grade	3.73	1.18	45
		7 th grade	2.97	1.24	34
		Total	3.41	1.26	79
	Total	5 th grade	3.55	1.21	92
		7 th grade	3.29	1.31	75
		Total	3.44	1.26	167

Table 3.3: ANCOVA Awareness of selling intent

	Type III sum of Squares	Df	Mean square	F	Sig	Partial Eta squared
Corrected Model	47.513	9	5.279	3.131	0.002	0.152
Intercept	43.436	1	43.436	25.764	0.000	0.141
Personalisation	13.703	1	13.703	8.128	0.005	0.049
Cue	0.157	1	0.157	0.093	0.761	0.001
Grade	15.881	1	15.881	9.420	0.003	0.057
Attitude TV-personality	8.713	1	8.713	5.168	0.024	0.032
Attitude Amusement park	1.598	1	1.598	0.948	0.332	0.006
Attitude towards the ad	0.063	1	0.063	0.038	0.846	0.000
Personalisation X cue	5.561	1	5.561	3.298	0.071	0.021
Personalisation X Grade	2.715	1	2.715	1.611	0.206	0.10
Cue X grade	0.425	1	0.425	0.252	0.616	0.002
Error	264.690	157	1.686			
Total	2.117.000	167				
Corrected Total	312.204	166				

Table 3.4: ANCOVA Word-of-mouth intention

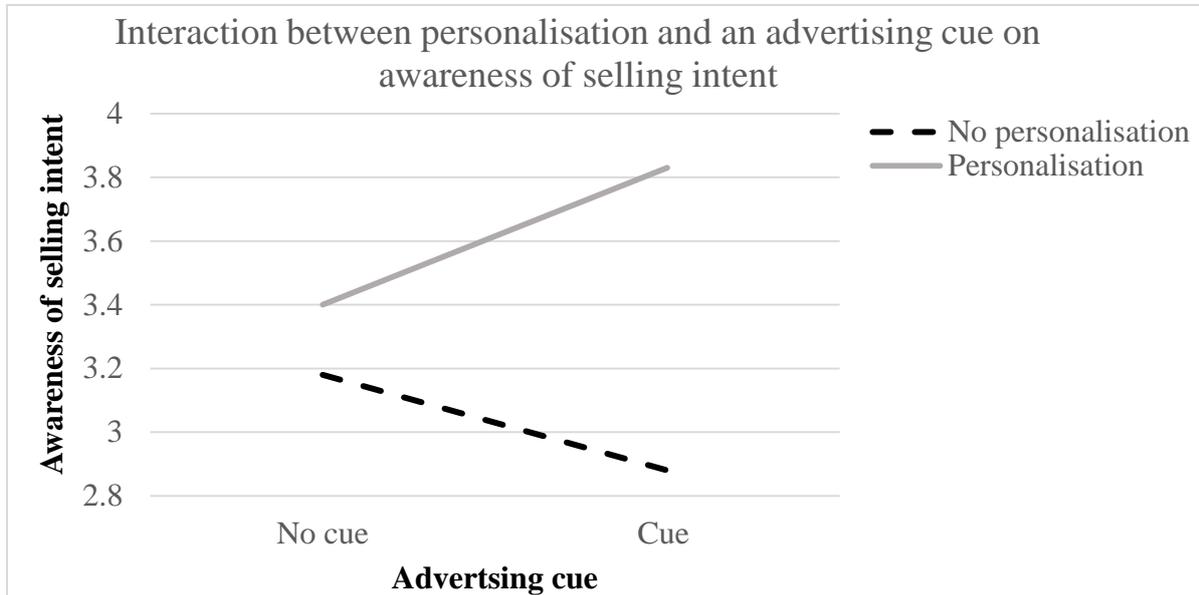
	Type III sum of Squares	Df	Mean square	F	Sig	Partial Eta squared
Corrected Model	62.858	9	6.984	5.476	0.000	0.239
Intercept	0.013	1	0.013	0.010	0.921	0.000
Personalisation	0.291	1	0.291	0.228	0.633	0.001
Cue	0.008	1	0.008	0.006	0.936	0.000
Grade	1.455	1	1.455	1.141	0.287	0.007
Attitude TV-personality	2.017	1	2.017	1.582	0.210	0.010
Attitude Amusement park	9.193	1	9.193	7.208	0.008	0.044
Attitude towards the ad	20.128	1	20.128	15.782	0.000	0.091
Personalisation X cue	0.727	1	0.727	0.570	0.451	0.004
Personalisation X Grade	7.164	1	7.164	5.617	0.019	0.035
Cue X grade	6.973	1	6.973	5.467	0.021	0.034
Error	200.232	157	1.275			
Total	2236.000	167				
Corrected Total	263.090	166				

There is a significant main effect of personalisation on awareness of selling intent ($F(1,157) = 8.13, p = 0.005$). Awareness of selling intent is higher for personalised ads ($M = 3.61$) compared to non-personalised ads ($M = 3.03$). Awareness of selling intent is higher in 7th graders ($M = 3.64$) than in 5th graders ($M = 3.01$) ($F(1,157) = 9.42, p = 0.003$).

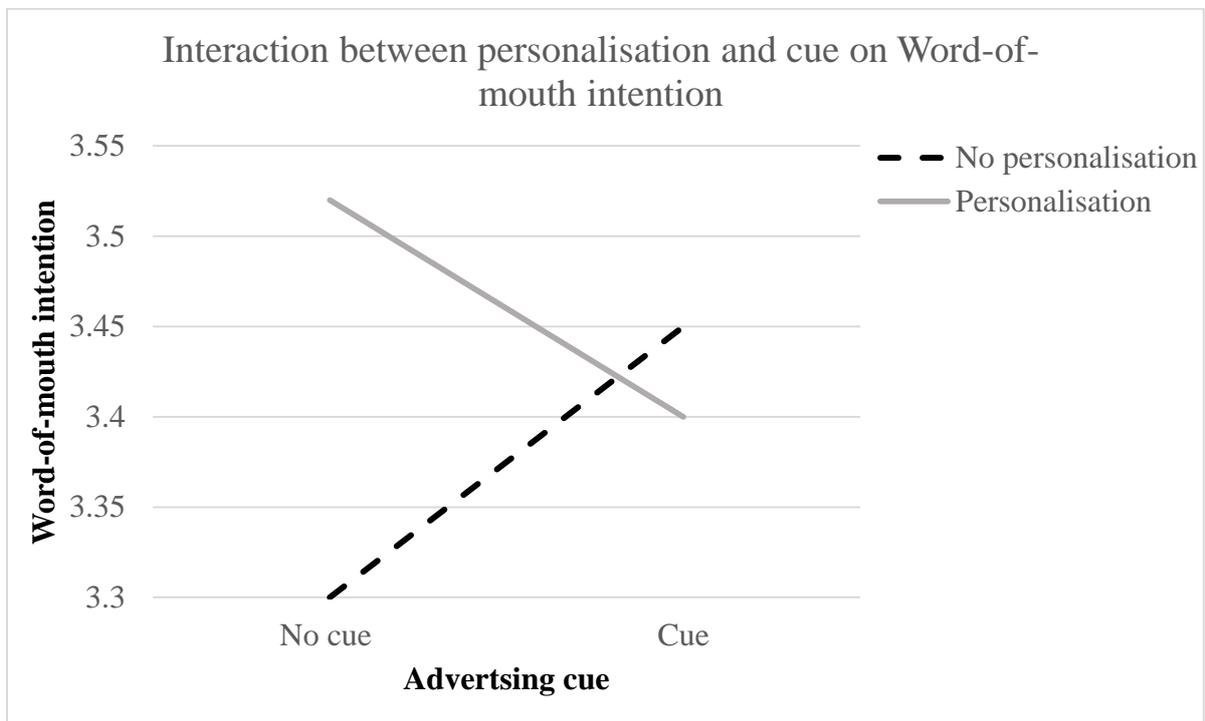
A marginally significant interaction between personalisation and cue is found for awareness of selling intent ($F(1,157) = 3.30, p = 0.071$). Simple effects analysis shows that in the presence of an advertising cue, awareness of selling intent is higher for personalised ads ($M = 3.83$), compared to non-personalised ads ($M = 2.88$) (Figure 3.1a). Hypothesis 1a is supported. No significant interaction between personalisation and cue is found for WOM intention ($F(1,157) = 0.57, p = 0.451$). Simple effect tests did not result in significant differences either (Figure 3.1b). Hypotheses 1b is not supported. There is no difference in awareness of selling intent ($p = 0.444$) and WOM intention ($p = 0.372$) between personalised ($M_{\text{Awareness of selling intent}} = 3.40, M_{\text{WOM intention}} = 3.52$) and non-personalised ads ($M_{\text{Awareness of selling intent}} = 3.18, M_{\text{WOM intention}} = 3.30$) if an advertising cue is absent. Hypotheses 2a and 2b are thus supported.

Figure 3.1: Effect of personalisation on a) awareness of selling and b) WOM intention moderated by cue

a) Awareness of selling intent



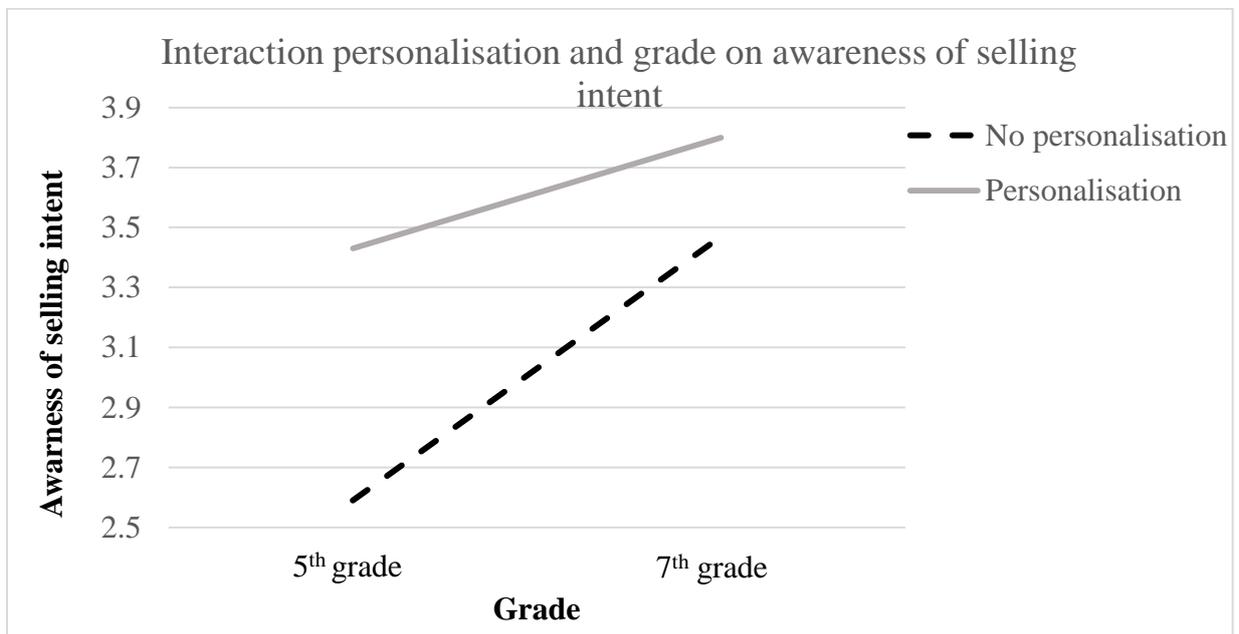
b) Word-of-mouth intention



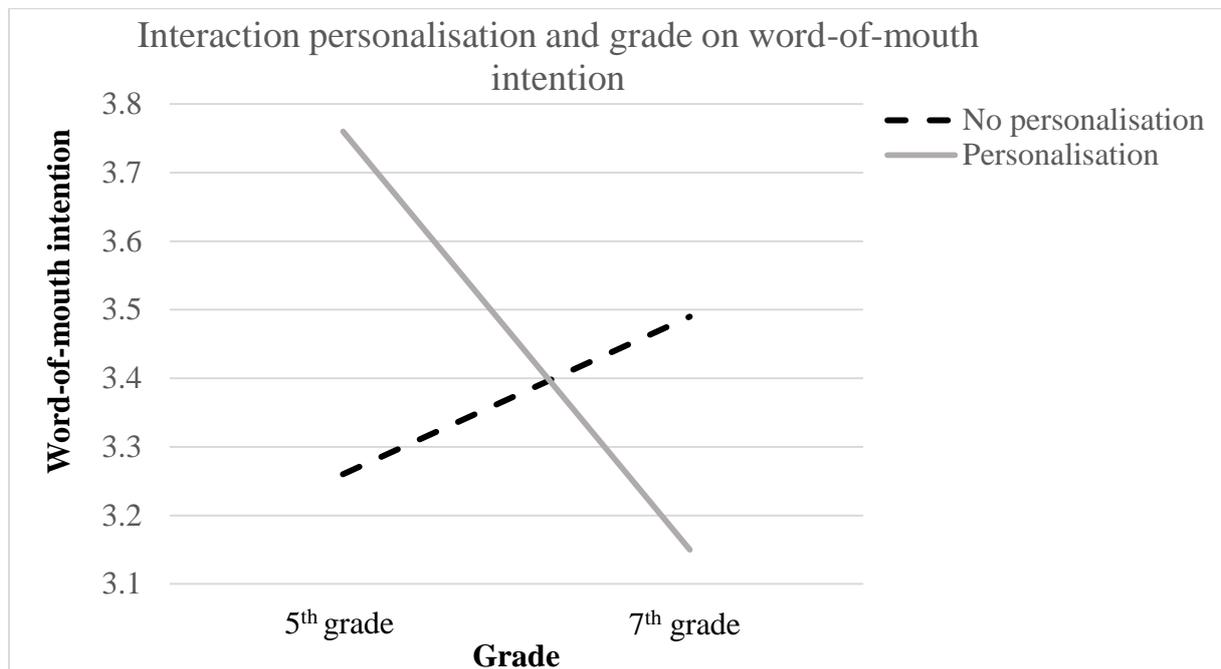
The interaction effect between personalisation and grade is not significant for awareness of selling intent ($F(1,157) = 1.61, p = 0.206$). However, simple effects analysis show that 5th graders' awareness of selling intent is higher ($p = 0.003$) if the ad is personalised ($M = 3.43$) compared to non-personalised ads ($M = 2.59$) (Figure 3.2a). Hypothesis 3a is not supported. A significant interaction ($p = 0.019$) between personalisation and grade was found for WOM intention. Simple effects analysis shows that 5th graders' WOM intention is higher ($p = 0.037$) if the ad is personalised ($M = 3.76$) compared to a non-personalised ad ($M = 3.26$) (Figure 3.2b). Hypothesis 3b is supported. There is no difference in 7th graders' awareness of selling intent ($p = 0.281$) and WOM intention ($p = 0.205$) between personalised ($M_{\text{Awareness of selling intent}} = 3.80, M_{\text{WOM intention}} = 3.15$) and non-personalised ads ($M_{\text{Awareness of selling intent}} = 3.47, M_{\text{WOM intention}} = 3.49$). Hypotheses 4a and 4b are thus not supported.

Figure 3.2: Effect of personalisation on a) awareness of selling intent and b) WOM intention moderated by grade

a) Awareness of selling intent



b) Word-of-mouth intention

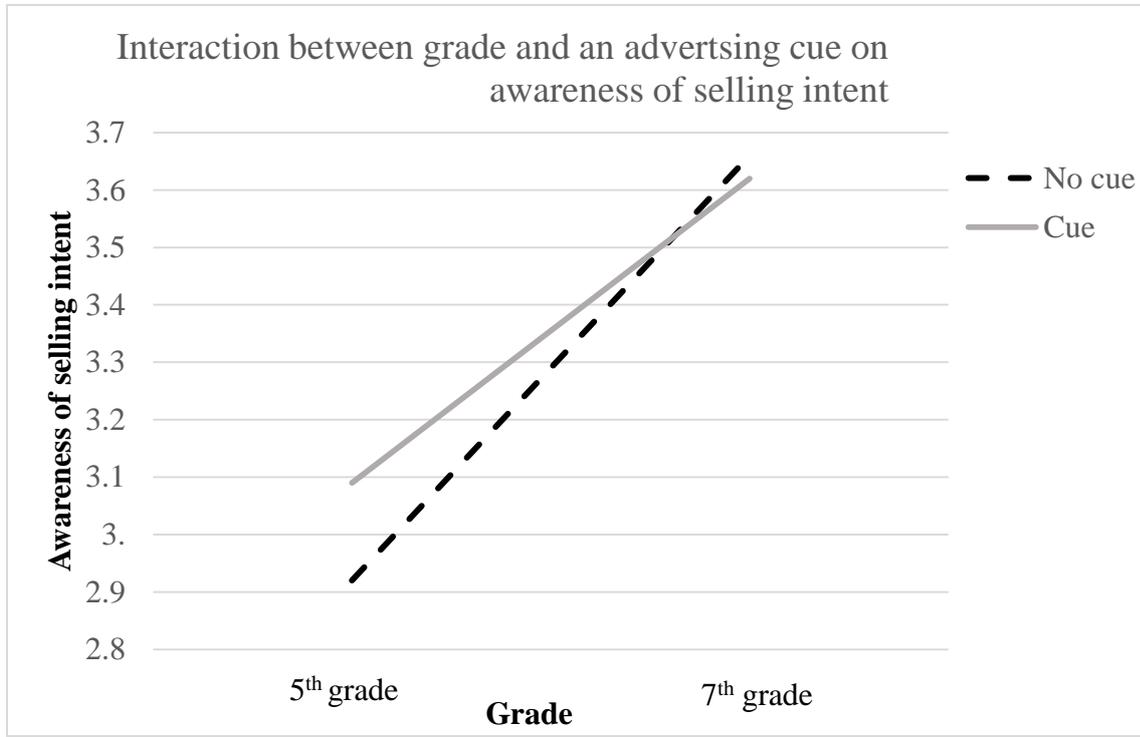


The interaction between grade and cue was not significant for awareness of selling intent ($F(1,157) = 0.25, p = 0.616$). Simple effect tests do not result in significant differences either (Figure 3.3a). Hypothesis 5a is not supported. A significant interaction between cue and grade is found for WOM intention ($F(1,157) = 5.47, p = 0.021$). Simple effects analysis shows a marginally significant difference ($p = 0.073$) in 5th graders' WOM intention between advertising with and without an advertising cue. If an advertising cue is present, 5th graders WOM intention is higher ($M = 3.72$) compared to when an advertising cue is not present ($M = 3.30$) (Figure 3.3b). This result is opposite to what we expected, so H5b is not supported. For 7th graders no difference was found in awareness of selling intent ($p = 0.895$) and WOM intention ($p = 0.132$) between advertising where an advertising cue is present ($M_{\text{Awareness of selling intent}} = 3.62, M_{\text{WOM intention}} = 3.12$) compared to when an advertising cue is absent ($M_{\text{Awareness of selling intent}} = 3.66, M_{\text{WOM intention}} = 3.52$). Hypotheses 6a and 6b are supported.

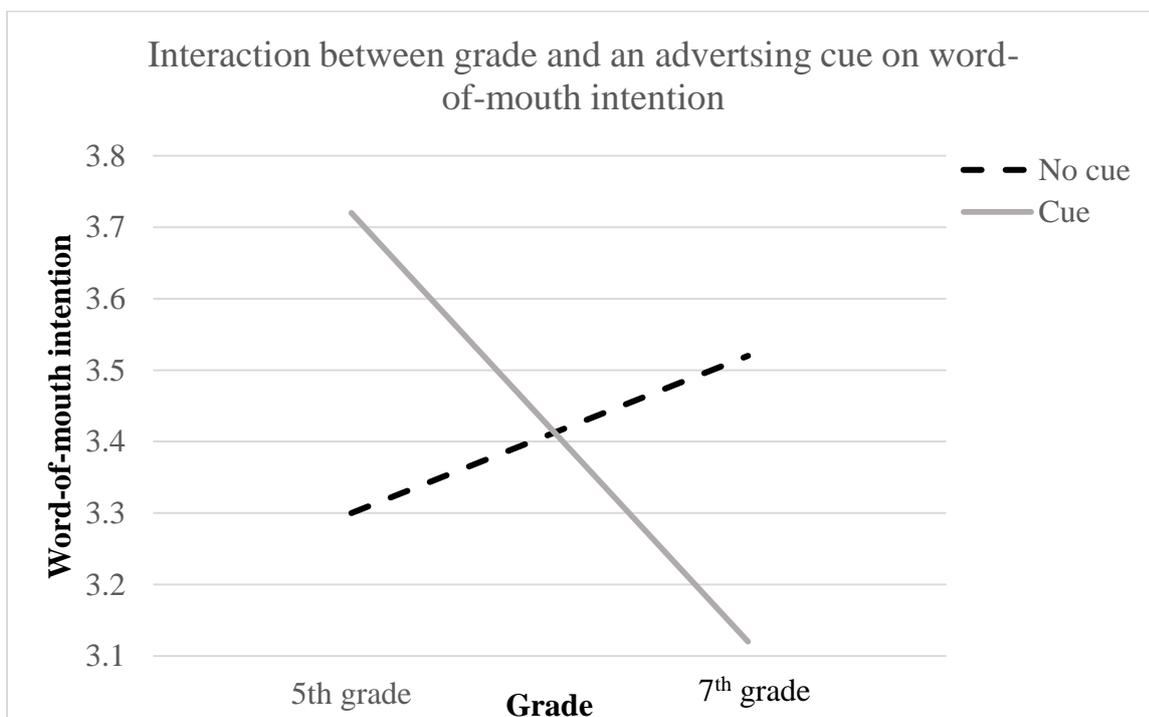
The covariate 'attitude towards the television personality' had a negative significant effect on awareness of selling intent ($F(1,157) = 5.17, p = 0.024$). There is a positive significant effect of the covariates 'attitude towards amusement parks' ($F(1,157) = 7.2, p = 0.008$) and 'attitude towards the ad' ($F(1,157) = 15.78, p < 0.001$) on WOM intention.

Figure 3.3: Effect of advertising cue on a) awareness of selling intent and b) WOM intention moderated by grade

a) Awareness of selling intent



b) Word-of-mouth intention



5 Conclusion and discussion

Young children are more susceptible to personalised advertising as this resulted in a higher awareness of selling intent for 7th graders than for 5th graders. These results are in line with traditional frameworks regarding consumer socialisation and persuasion knowledge that state that advertising and persuasion knowledge develop gradually during childhood. Older children are more likely to have more experience with advertising due to increased advertising exposure and better developed cognitive skills (Baek & Morimoto, 2012; Friestad & Wright, 1994; John, 1999; Simonson, 2005; Wright et al., 2005).

As children and teenagers are mostly unaware of personalisation strategies as advertising tactics (Kelly et al., 2010), cues could make them aware of the commercial purpose of these seemingly innocent posts that disguise the true purpose of their appearance. The presence of an advertising cue does indeed result in a higher awareness of selling intent for personalised ads. However, although the results are in the expected direction indicating that the effect of an advertising cue is stronger for personalised ads than for non-personalised ads, according to conventional significance levels, the presence of an advertising cue did not significantly lower WOM intention for personalised ads. An explanation could be that WOM intention is not triggered by a cue, but depends more on social (dis)approval of others (Eisingerich, Chun, Liu, Jia, & Bell, 2015). The presence of the favourite television personality in the personalised conditions could also be appealing to the 5th graders, triggering excitement they want to share with their friends and peers, overruling the disclosing effect of a cue. This requires further research. As expected, there is no difference in WOM intention and awareness of selling intent between personalised and non-personalised ads when an advertising cue is absent.

We expected that ad personalisation would result in less awareness of persuasive intent and more positive WOM in 5th graders because they have only limited understanding of the commercial intent behind this technique and they appreciate the personalisation. In contrast to what we expected, ad personalisation results in a higher awareness of selling intent among 5th graders. Earlier findings have also shown that, if a person notices that an advertisement is personalised, this can raise awareness of selling intent (Baek & Morimoto, 2012; Friestad & Wright, 1994; Simonson, 2005). As expected, ad personalisation resulted in a higher WOM intention among children of the 5th grade. Apparently, in this group, a higher awareness of selling intent does not lead to a lower behavioural intention. This result is in line with the study of Vanwesenbeeck et al. (2016) showing that persuasion knowledge did not result in a lower

purchase request intention among young teenagers (10-14 years). A possible explanation may be that young teenagers do not mind the selling intent and react positively to an advertisement that shows their favourite celebrity. Understanding selling intent is less difficult than understanding that advertising tries to establish more positive behavioural intentions towards the advertised product or brand (Moses & Baldwin, 2005). This might indicate that children are aware of selling intent, but do not identify the presence of the TV-personality in the personalised conditions as a persuasive technique.

Although 5th graders recognise the selling intent of personalised ads better than of non-personalised ads, personalised ads also lead to a higher WOM intention, suggesting that, although personalisation leads to more awareness of selling intent, it does not lead to negative behavioural intentions, but rather the opposite. For 7th graders we expected that, since they should have acquired an adult level of understanding of advertising techniques, they may develop a higher level of awareness of selling intent and respond more negatively to personalised advertising. However, 7th graders' awareness of selling intent was not triggered by personalised advertising more than it was by non-personalised ads and their WOM intention was not lower for personalised ads than for non-personalised ones. These findings suggest that even for 7th graders, personalised and integrated advertising formats are still difficult to recognise and to understand, and they are still susceptible to the effects of ad personalisation. This is in line with previous research that found that even at age 12 children's persuasion knowledge or advertising knowledge has not reached the same level as that of adults (Panic et al., 2013; Rozendaal et al., 2010; van Reijmersdal et al., 2016).

Since the age group of 5th graders are assumed to be cued processors, we expected that, in this group, an advertising cue would lead to a higher awareness of selling intent and a lower WOM. However, our results show that an advertising cue does not did trigger 5th graders' awareness of selling intent, nor did it lower their WOM intention. WOM intention was even higher among 5th graders if a cue was present compared to when a cue was absent, which is opposite to what was expected. This suggests that even if young teenagers notice an advertising cue, this will not necessarily lead to negative ad responses or lower their behavioural response. Previous research that focused on the effect of advertising cues in children has shown that cues by themselves do not always lead to negative reactions towards advertising stimuli (An & Stern, 2011; Panic et al., 2013; Rozendaal, Lapierre, Van Reijmersdal, & Buijzen, 2011). We expected that children in the 7th grade do not need an advertising cue to recognise advertising and therefore we expect that a cue would not affect their responses to it. Our results indicate that, indeed, for 7th graders

there was no difference in awareness of selling intent and WOM intention between the presence or absence of an advertising cue. However, although not significant at conventional levels, our results for this group point at the direction of a more negative WOM intention in the presence of an advertising cue. This suggests that, to a certain extent, 7th graders are still cued processors, while 5th graders have not even reached this stage and may still be limited processors, as the presence of an advertising cue even improved their WOM intention. This is an interesting result as it indicates that that traditional frameworks concerning persuasion knowledge and consumer socialisation in youngsters should be reconsidered (Panic et al., 2013). Indeed, the traditional view that youngsters from the age of 12 years onwards have an adult understanding of advertising, should be challenged, and maybe even teenagers older than 12 need a clear cue to trigger persuasion knowledge when exposed to personalised and/or integrated native advertising formats (An & Stern, 2011; Verhellen et al., 2014).

6 Theoretical and managerial implications

Frameworks often used in research on children and advertising such as the Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994) and consumer socialisation 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 probably be updated or extended to the integrated and/or personalised nature of the current advertising landscape (Panic et al., 2013; Vanwesenbeeck et al., 2016). This does not mean that the basic principles stated in these theories do not apply anymore. The skills, experiences and knowledge about advertising do obviously develop during childhood, but the question is whether for novel advertising formats the different stages still apply to the traditional age groups. Also other studies indicate that, for sophisticated advertising formats, at the age of 12 advertising knowledge and understanding has not reached the same level as in adults (Panic et al., 2013; Rozendaal et al., 2010). For these contemporary advertising formats, teenagers may remain limited processors or cued processors beyond the age of 12.

The current study also has implications for public policy and different stakeholders in the debate regarding youngsters and advertising. Our results show that the younger the target group of advertising is, the more vulnerable they are for being persuaded by advertising without being aware that the native message actually is an advertisement. Especially children younger than 12, but also older children, should be protected against the negative effects of subtle advertising

techniques. In order to comply with this necessity, certain SNSs were developed for children younger than 13 such as, Kidzworld, Jabbersmack, and Sweetie high, or ad-free applications such as Facebook's 'Messenger Kids' launched in December 2017 in the United States (Facebook, 2017). These child-friendly websites also create partnerships with well-known brands in the entertainment industry resulting in branded pages and brand created content in order to survive (Andrews, 2011; Makice, 2011). Although the *Messenger Kids* initiative seems an ethical and responsible move, as the application is especially designed for children younger than 13, Facebook profiles will be created for children younger than 13, violating the legal age rule. Given that full protection of minors under the age of 13 is an utopia, minors should be informed and educated about new advertising formats and advertising techniques. Consequently, even those initiatives should be aware of the importance of age-related responses to integrated and/or personalised online advertising and the relevance of advertising cues. Efforts to inform and educate children and teenagers should not be limited to children younger than 13, but should also include older teenagers.

Raising awareness on the topic of advertising and advertising literacy could be established by means of including educational programmes on this topic in schools, aimed at both children and teenagers (Nelson, 2016). Informing other stakeholders, such as parents, teachers, youth workers and policy makers, is necessary as well, as research shows that even adults have difficulties in recognising novel advertising formats (Boerman, Willemsen, et al., 2017), and they may not always be aware of their effect on youngsters. Results from academic research on the topic should be communicated to the advertising industry and (self)-regulation organisations to convince them to take the vulnerability of the receivers of their messages into account, especially youngsters, and to show their concern, responsibility and effort to develop advertising cues that are recognisable and clear in order to correctly develop advertising literacy and persuasion knowledge.

7 Limitations and further research

Due to technical limitations, participants in this study were exposed to a static Facebook News feed instead of an interactive Facebook page. Using an interactive social networking site could improve external validity of the experiment by measuring actual behaviour such as clicking through or eWOM. Future research could use field studies to investigate personalisation of advertising on SNSs in the same and subtle manner as it happens 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 appears to be popular amongst both children and teenagers aged 10-13 years (Apestaartjaren, 2016; Ofcom, 2016). However, other social networking sites (e.g. Instagram, Snapchat) are increasingly used by children and teenagers as well, and these platforms also contain sponsored content or native advertising, based on users' preferences in other social media, and with or without a disclosure and differing in disclosure language (Evans et al., 2017). Therefore, it might be interesting to study the effects of advertising in other social networking sites and to study the effects of advertising cues on these platforms.

Recently, debates have started about influencers and celebrities who mention and show products in their Instagram posts disguised as unpaid or unsponsored posts (Evans et al., 2017). Moreover, even if advertising disclosures in these formats are used, the language of the cues differs, which can lead to different interpretations of the message (Evans et al., 2017). To make sure that the sponsored nature of these messages is correctly and consistently revealed to the receivers of these messages, regulators and advertisers should agree on the usage of one specific disclosure that is easy to recognise and to understand. This requires further research on effective advertising cues.

A replication of this study among teenagers older than 13 could provide insights into older teenagers' understanding of these novel advertising formats and could provide interesting insights for regulation and legislation concerning this topic. Since research shows that even relatively few adults recognise sponsored content on Facebook (Boerman, Willemsen, et al., 2017) and its persuasive intentions, it is expected that teenagers will have difficulties with this even more.

The image of the advertising cue in our study differs from the existing cues in Facebook such as 'sponsored content' and 'ad'. Up till now, the results of research on the topic of advertising cues have been mixed. As such there is a call for further research on the use and impact of different advertising cues on different platforms.

8 Appendices

8.1 Overview of stimuli

Example of stimulus Facebook page with personalised ad

The image shows a screenshot of a Facebook profile page for a user named Sam Janssen. The page layout includes a top navigation bar with a search bar and user profile information. On the left, there is a sidebar with navigation options like 'Profiel bewerken', 'Nieuwsoverzicht', and 'Pagina's ontdekken'. The main content area shows a post from Sam Janssen with a photo of a waterfall and the text 'Sam Janssen heeft haar profielfoto bijgewerkt. 55 min'. Below this, there is a 'Voorgesteld bericht' (Recommended post) for 'Coaster Land', which is a sponsored advertisement. The ad features a photo of a woman in front of a roller coaster and includes the text 'Coaster Land De wereld op z'n kop!' and the website 'WWW.COASTERLAND.BE'. The ad also has a 'Meer informatie' button and engagement metrics (123 likes, 10 comments, 15 shares).

Example of personalised and non-personalised stimulus ad



Personalised stimulus ad

Stimulus ad without personalisation

Example of stimulus ad with advertising cue



8.2 Survey

Survey questions with measurements between brackets

Question 1: Out of this list of 6 animals, which one is your favourite animal? (filler item)

- Lion
- Cat
- Dog
- Dolphin
- Rabbit
- Horse

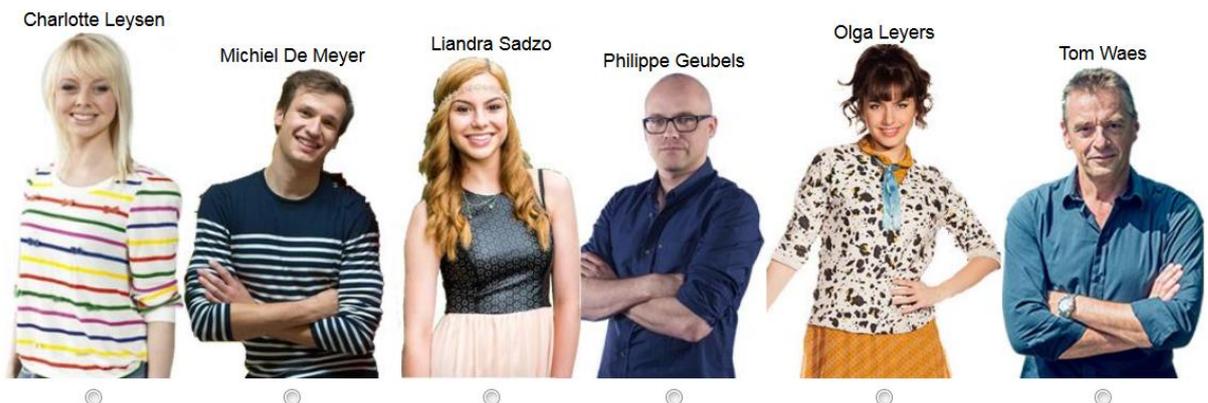
Question 2: Out of this list of six dishes, which one is your favourite dish? (filler item)

- Spaghetti
- French fries
- Pizza
- Ice cream
- Lasagna
- Pita

Question 3: Out of this list of six colours, which colour is your favourite one? (filler item)

- Red
- Blue
- Green
- Yellow
- Black
- White

Question 4: Out of this list of six television personalities, which one is your favourite television personality? (question on which the personalization manipulation is based)



Question 5: How much do you like this television personality? (Based on the chosen television figure in the previous question – attitude towards the television personality)

I don't like this TV-personality at all	I don't like this TV-personality	I don't know	I like this TV-personality	I like this TV-personality very much
☹️ ☹️	☹️	😐	😊	😊 😊

Question 6:

I am a...

- Boy
- Girl

Question 7:

How old are you?

Question 8: In what follows, you will have to watch a YouTube video. Watch this video attentively. After the video you can continue filling out this questionnaire.

(filler item)



Question 9:

In what follows you will see a fictitious Facebook page. Try to imagine that this Facebook page is yours and watch it as if you would normally do. After you have done this, you can go to the following questionnaire.

(this picture shows the personalisation, without a cue condition).

The image shows a screenshot of a Facebook homepage. At the top, there is a search bar with the text "Zoek naar personen, plaatsen en dingen" and a user profile for "Jij" with the text "Startpagina". Below the search bar, there are navigation options: "Profiel bewerken", "Nieuwsoverzicht", "Berichten", and "Evenementen". The main content area shows a post from "Sam Janssen" with the text "Wat ben je aan het doen?" and a button "Plaatsen". Below this, there is a post from "Sam Janssen" with the text "Sam Janssen heeft haar profielfoto bijgewerkt." and a photo of a waterfall. At the bottom, there is a sponsored advertisement for "Coaster Land" with the text "De wereld op z'n kop!" and a photo of a woman in front of a roller coaster.

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Question 10:

Which of the following four amusement parks was shown on the Facebookpage? (brand recognition)



Question 11: On the following question you can answer by indicating smileys. The list shows which smiley corresponds to which answer option. (WOM intention)

-  = No, definitely not
-  = No, I do not think so
-  = Not yes, not no (neutral)
-  = Yes, I think so
-  = Yes, definitely

					
Would you tell your friends about this amusement park?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 12: On the following question you can answer by indicating smileys. The list shows which smiley corresponds to which answer option. (Attitude towards the brand)

-  = No, definitely not
-  = No, I do not think so
-  = Not yes, not no (neutral)
-  = Yes, I think so
-  = Yes, definitely

Coasterland is....

					
Nice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beautiful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fantastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ugly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funny	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 3: Personalisation

Question 13: On the following question you can answer by indicating smileys. The list shows which smiley corresponds to which answer option. (Attitude towards the ad)

-  = No, definitely not
-  = No, I do not think so
-  = Not yes, not no (neutral)
-  = Yes, I think so
-  = Yes, definitely

Do you think the advertisement for Coaster land is:

					
Nice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beautiful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fantastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ugly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funny	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 14:

On the following question you can answer by indicating smileys. The list shows which smiley corresponds to which answer option.

-  = No, definitely not
-  = No, I do not think so
-  = Not yes, not no (neutral)
-  = Yes, I think so
-  = Yes, definitely

(Awareness of selling intent)

							
Is advertsing on Facebook there to make you buy the products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 15:

Do you like to go to an amusement park? (attitude towards amusement parks in general)

I don't like it at all	I don't like it	I don't know	I like it	I like it very much
				

Question 16:

Have you ever had a class about advertising on the internet?

- Yes
- No

End of the survey:

Thank you four filling out this questionnaire.

Debriefing in class

8.3 Parental consent form in Dutch



Datum

Betreft: uitnodiging deelname onderzoek over reclame op sociale netwerksites bij kinderen

Beste ouder
Beste voogd,

Uw kind wordt uitgenodigd deel te nemen aan een onderzoek dat wordt uitgevoerd door het departement Marketing, faculteit Toegepaste Economische Wetenschappen van de Universiteit Antwerpen.

Het onderzoek waarvoor wij uw medewerking en die van uw kind vragen, is getiteld 'Reclame op sociale netwerksites bij kinderen'.

Wij zijn op zoek naar leerlingen in het 5^{de} leerjaar om de effecten na te gaan van reclame op sociale netwerksites. Daarbij proberen we na te gaan of het vermelden van een waarschuwing voor de reclameboodschap kinderen helpt om deze boodschap als reclame te herkennen en hen bijgevolg wapent tegen de effecten van reclame. De reclameboodschap, alsook het merk, zullen fictief zijn. Dit onderzoek zal doorgaan tijdens de lesuren op **datum**.

Tijdens dit onderzoek zullen wij aan uw kind vragen een fictieve sociale netwerkpagina te bekijken waarin een fictieve reclameboodschap wordt getoond. Daarna zullen wij hem/haar vragen een korte vragenlijst in te vullen. Het onderzoek duurt circa 10 minuten. Na afloop van het onderzoek volgt er een klasgesprek waarbij wij meer informatie geven over het opzet en het doel van het onderzoek.

Omdat dit onderzoek wordt uitgevoerd onder de verantwoordelijkheid van het departement Marketing, faculteit Toegepaste Economische Wetenschappen van de Universiteit Antwerpen, heeft u de garantie dat:

1. De anonimiteit van uw kind gewaarborgd is en dat de antwoorden of gegevens onder geen enkele voorwaarde aan derden zullen worden verstrekt.
2. U of uw kind kan weigeren mee te doen aan het onderzoek of kan de deelname afbreken zonder het opgeven van reden. U kan ook achteraf (binnen 24 uur na deelname door uw kind) uw toestemming intrekken voor het gebruik van de antwoorden van uw kind of de gegevens voor het onderzoek.

Voor meer informatie over dit onderzoek en de uitnodiging tot deelname kunt u ten allen tijde contact opnemen met onderzoeksleiders Kristien Daems (Kristien.Daems@uantwerpen.be) of Freya De Keyzer (Freya.DeKeyzer@uantwerpen.be).

Wij hopen u hiermee voldoende geïnformeerd te hebben en danken u bij voorbaat voor uw toestemming voor de deelname van uw kind aan dit onderzoek.

Indien u **geen** toestemming verleent voor deelname door uw kind aan dit onderzoek, gelieve dan onderstaand strookje mee te geven aan uw kind voor **datum**.

Met vriendelijke groet

Dra. Kristien Daems

Dra. Freya De Keyzer

Departement Marketing, Faculteit Toegepaste Economische Wetenschappen, Universiteit Antwerpen

Ik, ouder van, uit het 5^e leerjaar/
1^e middelbaar van NAAM SCHOOL, verleen **geen** toestemming voor deelname van mijn kind aan dit onderzoek.

Datum:

.....
....

Handtekening:

.....

Chapter 4

Advertisers' perceptions regarding the ethical appropriateness of new advertising formats aimed at minors^{1,2}

¹ Manuscript published as: Daems, K., De Pelsmacker P., & Moons, I. (2017): Advertisers' perceptions regarding the ethical appropriateness of new advertising formats aimed at minors, *Journal of Marketing Communications*, doi: 10.1080/13527266.2017.1409250

² An earlier version of this chapter was presented at the 2017 ICORIA conference in Ghent.

Chapter 4 Advertisers' perceptions regarding the ethical appropriateness of new advertising formats aimed at minors

Abstract

Although they are key stakeholders, advertisers' views on the usage of novel (integrated and/or interactive) advertising towards minors has remained largely unexplored in academic research. This study aims to fill this gap by examining advertising professionals' opinions about the ethical appropriateness of using novel advertising formats aimed at children and teenagers, how to advance advertising literacy in minors, and their views of practices that are potentially privacy-invading, by means of both a quantitative online survey and qualitative in-depth interviews with Belgian advertising professionals. Results show that advertisers perceive that from 12 years onwards, minors are capable to understand novel advertising formats and it is ethically justified to use them. Remarkably, advertisers would inform minors already from the age of 10 years onwards about the commercial intention behind new advertising formats. Advertisers have strict opinions about collecting information online from minors. They advocate a combination of laws and self-regulation and governmental and educational campaigns to raise awareness and develop advertising literacy.

1 Introduction

In the advertising world, (self-)regulation, guidelines and codes exist with respect to advertising aimed at minors. Examples of self-regulation initiatives are the ICC code of Advertising and Marketing Communication practice, the EU Pledge, and the CARU guidelines (EU Pledge, 2017b; ICC, 2017; The Children's Advertising Review Unit, 2009). However, despite these initiatives to protect minors against potentially misleading and deceptive advertising, there still exists a lack of regulation on novel (online) integrated and/or interactive advertising formats (Calvert, 2008; Füg, 2008; TaylorWessing, 2013). Additionally, online advertising practices are often used to collect and use personal data (Bright & Daugherty, 2012; McStay, 2012; Terlutter & Capella, 2013), and are therefore potentially privacy-invading.

Consequently, the use of novel advertising formats raises questions about their ethical appropriateness, and about how advertising literacy should be improved, especially with children and teenagers (Eagle & Dahl, 2015; Moses & Baldwin, 2005; Nebenzhal & Jaffe, 1998). Research on new advertising formats aimed at children and teenagers from an advertiser perspective is lacking. Moreover, advertising professionals' view on advertising aimed at minors has received scant attention in academic literature and is limited to traditional advertising (Clarke & Gardner, 2005; Geraci, 2004; Gray, 2005; Grimm, 2004; Martínez, 2016).

The present study contributes to developing insights into how Belgian advertising professionals perceive several aspects of the ethical ramifications of using novel advertising formats to target children and teenagers. The study can inform the advertising profession and public policy about these perceptions and be a starting point to influence or change them.

2 Literature review

2.1 Children's and teenagers' understanding of advertising

From an early age onwards, children are confronted with advertising practices, whilst a majority of them is unconscious about the commercial and persuasive intent behind them (Crane & Kazmi, 2010). In order to be able to cope in a correct way with promotional efforts, the development of advertising literacy is of crucial importance. Advertising literacy is the knowledge about advertising, the ability to recognise advertising techniques, and the capability to understand the persuasive intentions behind them (John, 1999; Rozendaal, Buijzen, et al., 2011). Identifying and understanding advertising depends on the ability to distinguish advertising from programme- or entertainment context (Moses & Baldwin, 2005). The ability to do so depends on factors such as the subtlety of the persuasive message, the similarity between the commercial and entertaining message and the presence of a cue or separator to announce the advertising message (Shiying, Pickering, Moondore, Blades, & Oates, 2014).

The Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994) describes how people identify and process advertising and which knowledge and experience an individual needs to cope with persuasive attempts: topic knowledge (knowledge about the topic of the message, e.g. product), agent knowledge (knowledge about the advertiser behind the persuasive attempt) and persuasion knowledge (knowledge about advertising formats and persuasive tactics)

(Wright et al., 2005). The cognitive skills and experience to acquire this knowledge develop through childhood and adolescence (John, 1999; Moses & Baldwin, 2005; Wright et al., 2005). Compared to adults, children and teenagers have limited cognitive skills, less advertising experience and less developed advertising knowledge. This makes them less able to process advertising in a conscious manner and more vulnerable for and at a greater risk of being misled by persuasive communication (Kunkel et al., 2004; Moses & Baldwin, 2005; Rozendaal et al., 2010). As a consequence, it is more difficult for minors to recognise and understand different advertising formats and advertisers' intentions and activate their persuasion knowledge and advertising literacy (John, 1999; Kunkel et al., 2004; Terlutter & Capella, 2013). According to John (1999) consumer socialisation of children is a sequence of three different stages (perceptual, analytical and reflective) through which children develop from preschool (3 years old) until adolescence (16 years old). From the analytical stage (7-11 years) onwards children are able to analyse stimuli (e.g. an advertisement) on multiple dimensions. Only from the reflective stage (11-17 years) onwards children or teenagers have the ability to fully understand advertising and advertisers' persuasive attempts as their social and information processing skills are further developed.

2.2 Changing advertising practices

Nowadays, children and teenagers grow up in a – predominantly online - media environment (websites, social media, games, mobile platforms, etc.) in which they encounter new integrated and/or interactive advertising formats on a regular basis (Blades et al., 2014; Bucy, Kim, & Park, 2011; Rideout, 2014). In integrated formats, the lines between advertising and other informative or entertaining media content have become increasingly blurred (Blades et al., 2014; Kunkel et al., 2004; Moore, 2004; Terlutter & Capella, 2013). An example of this integration in traditional media is brand placement, the paid inclusion of brand identifiers in media content (television programmes, movies) (Gupta & Lord, 1998; Karrh, 1998).

Besides, novel advertising formats persuade children and teenagers in an implicit manner by means of subtle affective associations (Nairn & Fine, 2008). Interactive advertising formats give the receivers the opportunity to interact with the message and are often perceived as fun and enjoyable (Hudders, Cauberghe, & Panic, 2016; Mallinckrodt & Mizerski, 2007). Advergaming is a typical example of online, interactive advertising formats aimed at children and teenagers. Advergaming embeds specific brand or product related items (e.g. logos, brand names, brand mascots) in a game (Mallinckrodt & Mizerski, 2007). This can lead to a

circumventing of minor's persuasion knowledge activation (Owen et al., 2013; Panic et al., 2013). In a highly entertaining environment especially children may not be able to identify the commercial intention and lack the ability to activate and retrieve their persuasion knowledge (Waiguny, Nelson, & Terlutter, 2012). It is harder to identify these (online) advertising formats as advertising and more difficult to understand their persuasive intent than it is for prominent (online) formats such as banner ads (Tutaj & van Reijmersdal, 2012).

Online (integrated) advertising practices are also often used to collect personal data (Bright & Daugherty, 2012; McStay, 2012; Terlutter & Capella, 2013) and are therefore liable to practices that are privacy-invasive and that inappropriately use personal data the media user is not always aware of, for instance, by having minors first subscribed to a newsletter or submit personal information before they can participate in a contest or play a game. Here again, based on children's limited cognitive skills, it can be expected that children are less likely than adults to take the privacy risks involved into account (Steeves, 2006).

Using integrated and/or interactive advertising formats, is often considered as inherently unethical, since they may hamper the activation of persuasion knowledge (Nairn & Fine, 2008; Owen et al., 2013), and raise questions about when and how they can be used, and how advertising literacy should be improved (Eagle & Dahl, 2015; Nebenzhal & Jaffe, 1998; Palmer, 2005). This is especially relevant when these formats are targeted at minors. John's analysis about minors' advertising literacy dates back to 1999 and the Persuasion Knowledge Model (Friestad & Wright, 1994) was developed based on insights from traditional advertising (Rozendaal et al. (2010)). However, current advertising is no longer dominated by traditional mass media advertising, but by integrated and interactive advertising formats (Kunkel et al., 2004). Consequently, recognising commercial messages as advertising, understanding the commercial and persuasive intention behind integrated and online advertising, and the activation of persuasion knowledge is even more challenging for children and teenagers than before (Moses & Baldwin, 2005). As a result, there may be an increased need to protect them and educate them about advertising to develop their advertising literacy (Crane & Kazmi, 2010).

2.3 Existing (self-)regulation and guidelines

Both governmental institutions and the advertising industry have formulated principles regarding advertising aimed at minors. The ICC Code provides guidelines about ethical and

responsible advertising directed at children for self-regulated organisations (ICC, 2017). The Children's Advertising Review Unit is a self-regulated initiative in the United States which implies standards (CARU guidelines) regarding the ethicality of advertising aimed at children (Ji & Laczniak, 2007; The Children's Advertising Review Unit, 2009). In Belgium, the Belgian Pledge (derived from a similar initiative at European level, the EU Pledge) is a voluntary, joint initiative between the Union of Belgian Advertisers (UBA), FEVIA (Federation of food industry in Belgium) and COMEOS (representative for Belgian commerce and services) in which their members commit to not target advertising towards children under the age of twelve for food and beverages which do not meet the nutritional standards (so called HFSS products) or not to target products at children under the age of 12, regardless of the product (The Belgian Pledge, 2017). In June 2017 the Belgian Pledge was updated and additional integrated and interactive (online) media channels (beyond television and print advertising) were added to the range of the Belgian Pledge (FEVIA 2017).

However, despite the existing (self-)regulation, codes and guidelines, there still is a lack of regulation on novel, integrated and/or interactive advertising formats (Calvert, 2008; Füg, 2008; TaylorWessing, 2013). The specific characteristics of these formats warrant up-to-date legislation and/or self-regulation. Advertising professionals are key stakeholders in this debate. Their fundamental understanding of the ethical ramifications of the use of novel advertising formats towards minors and their willingness to take them into account in developing advertising campaigns is crucial.

2.4 Advertising professionals' opinions regarding advertising aimed at minors: research questions

Advertising professionals' view on the ethical acceptability of advertising and advertising formats has received scant attention in academic research. Apart from Harris Interactive's study (Geraci 2004; Grimm 2004) and Martinez's (2016) study, to the best of our knowledge, there are no published studies on advertisers' opinions regarding advertising practices aimed at children and teenagers, let alone their view with respect to new advertising formats. However, advertising professionals are the main decision makers with respect to the target groups, formats and stimuli used in their campaigns. Besides commercial concerns, one might expect that ethical considerations also play a role in these decisions. Consequently, developing insights into advertising professionals' opinions about the ethical appropriateness of novel advertising formats aimed at children and teenagers, how minors should be informed and how their

advertising literacy should be improved, and how they could be protected by (self-)regulation, is important. The current study aims at exploring the practice and perception of advertising professionals regarding these issues, and aims to answer the following research questions:

RQ 1: Which new advertising formats are mostly used towards children and teenagers?

RQ 2: According to advertising professionals, from which age onwards

- (a) do minors understand the commercial intention behind new advertising formats,
- (b) is the usage of these new advertising formats ethically acceptable,
- (c) should minors be made aware of the commercial intent of these marketing communication techniques?

RQ 3: What are the characteristics of an ethical data collection and data protection policy aimed at minors?

RQ 4: How should advertising towards children and teenagers be regulated and how should advertising literacy be developed?

3 Method

The study uses a mixed method approach by means of both a quantitative online survey and follow-up qualitative interviews.

3.1 Online survey

3.1.1 Research population and sample

The research population is staff of Belgian advertisers and Belgian advertising agencies. The sampling frames for the online survey were the membership list of the UBA (Union of Belgian Advertisers) and a list of employees of advertising agencies retrieved from the website of the ACC (Association of Communication Companies). In total, 2,614 advertisers from 245 different companies and 160 advertising professionals working in 79 advertising agencies were invited by email to participate to an online survey. The survey consisted of forced response questions (except for the question where the respondents could leave their email address to

participate in the follow-up study). As a result the respondents could not skip questions they did not want to answer. However, the respondents could stop and leave the survey any time. Each respondent received the questions of the survey in the same order. Only the order of the vignettes was randomised across respondents. As a result the questions at the beginning of the survey were answered by more respondents compared to questions at the end of the survey. One hundred and sixty one respondents started the survey. Seventy-one of them only partially completed it, because they dropped out after the introductory questions (44), after the vignettes (18), or after part of the last sections (9) of the questionnaire. Ninety respondents completed the full survey. The analyses were carried out on the number of respondents who answered the question analysed.

3.1.2 Questionnaire and measures

In the current study a minor is defined as an individual between six and eighteen years old. This group is divided into two subgroups, namely children (between six and twelve years old) and teenagers (between thirteen and eighteen years old).

After a number of introductory questions, nine vignettes were presented in randomised order (see appendix 9.1 for the vignette description). Vignettes are descriptions of concrete situations or scenarios presented to the respondents to reflect upon or give their opinion about (Mortelmans, 2007). The nine vignettes describe new integrated and/or interactive advertising formats used to target minors in both offline and online environments without mentioning the specific name or advertising format they refer to: product placement on television (PP), in-game advertising (IGA), advergames, applications, video advertising, merchandising, online behavioural advertising (OBA), search engine marketing (SEM) and location based services (LBS). These advertising formats are prominent examples of novel advertising formats. They were most often mentioned in exploratory interviews with advertisers and advertising agencies as formats that are used towards minors. Merchandising is the only traditional advertising format and was chosen because it was often mentioned as a very prominent technique when targeting children. The vignettes can be found in appendix 8.1. 117 respondents answered all three questions for each of the nine vignettes.

By means of a slider ranging from 6 to 18 years old, for each vignette the respondents answered two questions:

- 1) *from which age onwards are minors capable of understanding the persuasive nature of the advertising technique described in the vignette?*
- 2) *from which age onwards is the type of advertising ethically acceptable to use?*

If respondents held the opinion that minors were not capable of understanding the advertising format, or that the usage of an advertising format was not ethically acceptable towards minors, they could indicate this answer option and they did not have to indicate an age on the slider. Only when a respondent indicated an age to the second question, they had to answer a third question:

- 3) *from which age onwards minors need to be notified about the commercial intent of the advertising format described in the vignette?*

For this question, they could also indicate that minors do not have to be warned about the commercial intent of the advertising format, and thus they did not have to indicate an age. These questions were based on the Harris Interactive study (Geraci, 2004; Grimm, 2004).

In the second section, respondents were asked how advertising to minors should be regulated, and through which organisations (governmental or educational) advertising literacy in minors should be improved (see appendix 9.2 for the survey). 99 respondents answered the questions in this survey block. The following five questions were presented (five-point Likert scale ranging from totally disagree to totally agree):

- *Commercial communication with regard to children/teenagers should be regulated...:*
 - *...exclusively through self-regulation*
 - *...exclusively through legislation*
 - *...through a combination of legislation and self-regulation*
- *The government should strive for awareness building in order to promote advertising literacy amongst children/teenagers,*
- *The educational system has a duty to promote advertising literacy amongst children/teenagers.*

In the third section, respondents were asked about the verification rules in ethical minors' protection (yes/no answer option) (97 respondents answered this question):

Chapter 4: Advertisers' perceptions

- *A proper data-protection policy on a social media platform that is accessible to children/ teenagers...*
 - *provides verification of the ages of children.*
 - *allows verification of the status of the parent or legal guardian.*
 - *provides clear information concerning the use of cookies and the possibility of disabling them.*

Respondent's opinion about the usage of advertising formats to collect personal data was asked by means of four questions (5-point Likert scale ranging from totally disagree to totally agree) (95 respondents answered these questions):

- *Children/teenagers should not be allowed to register with a brand website or mobile platform without permission from a parent or legal guardian,*
- *The collection of personal information from children/teenagers should be prohibited,*
- *Personal information from children/teenagers should not be collected, processed or used without permission from their parents or legal guardians,*
- *It is important for parents or legal guardians to be notified of the processing of personal information from their children /teenagers.*

Additionally, two questions were asked concerning collection of personal data from minors (95 respondents answered these questions):

- *The collection of personal information from children/teenagers...*
 - *is an ethically acceptable strategy.*
 - *is a strategy for which it is important to receive permission from parents or legal guardians.*

The questions concerning privacy policy, data collection and protection were based on a report from the Federal Trade Commission (2012) and on the rules about (verifiable) parental consent and online privacy from the U.S.' COPPA (Children's Online Privacy Protection Act, 1998).

The fourth section of the survey asked advertisers who target minors which forms of advertising they use towards children and/or teenagers. Respondents had to answer these questions only for

the target group (children and/or teenagers) towards whom they target advertising. 94 respondents answered this question.

The survey ended with demographic questions: the industry of the company the respondent works in, in which department the respondent works, level of education, age and gender. If respondents were willing to participate in a follow-up in-depth interview they could leave their email address.

3.2 Qualitative follow-up study

As a follow-up to the survey, 10 semi-structured in-depth interviews with advertising professionals were held (hereafter referred to as 'the interviewees'). Of these 10 interviewees, three were advertisers out of a list of 23 who completed the survey and were willing to participate in a follow-up interview. The other seven interviewees did not participate in the survey. The latter were selected from a list obtained from the Belgian Union of Advertisers with 27 companies that advertise to either children or teenagers. The interviews took place in a face-to-face setting and took about 45 minutes to one hour. The purpose of this qualitative follow-up study was to corroborate, nuance, interpret and enrich the insights from the survey. The interviews covered the same topics as the survey (see appendix 9.3 for the topic guide). For each topic, the interviewees were asked to voice their opinion, were confronted with the results from the survey, and were probed to comment on them and to explain their agreement and/or nuances. The mix of both interviewees that did participate in the survey and those that did not participate in the survey was useful to have the interviewees reflected upon their own perceptions if they participated in the survey, or to have the interviewees reflect upon the perceptions of other advertisers if they did not participated in the survey. All interviews were recorded and transcribed afterwards to facilitate the analysis with the NVivo software programme.

4 Results

The results from both the quantitative and qualitative study are reported together for each research question.

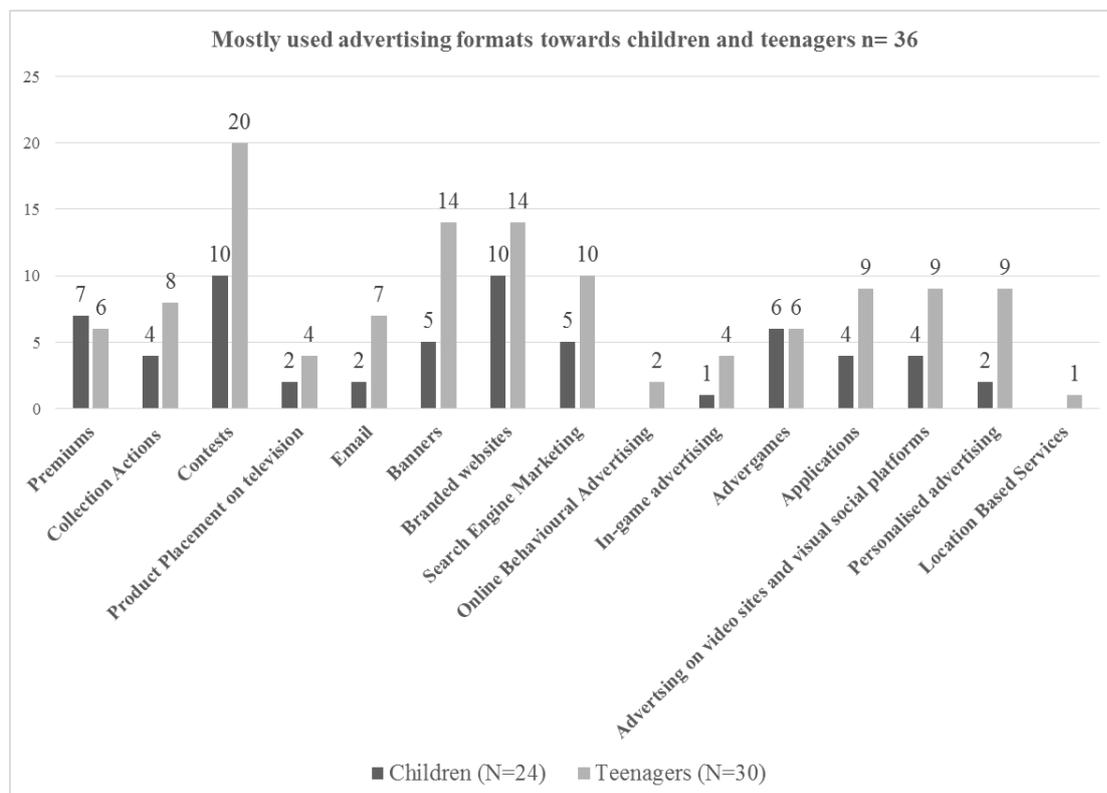
4.1 Sample characteristics

One hundred and sixty one respondents started the survey and 90 respondents (85 advertising professionals and 5 advertising agency professionals, 54 females, $M_{age}=41.5$, 70 respondents educated at master's level) fully completed it. Both groups were taken together in the analysis. The financial industry (14.13%), the food industry (11.96%) and government (11.96%) are most represented. Most advertisers work in a marketing (50%) or a communication department (30.2%). The five participating advertising agency professionals work for more than ten industries.

4.2 Advertising formats used towards minors

The majority (61.7%) of the respondents only target adults (older than 18 years). 38.8% (36) professionals work for a company that advertises to minors. Six of these 36 advertising professionals only target children and twelve of them only advertise to teenagers. Half of the advertisers who target minors (18) focus on both children and teenagers. So, overall, 24 target children and 30 advertise to teenagers. The advertising formats used by advertisers who target children or teenagers are given in absolute numbers in Figure 4.1.

Figure 4.1: Advertising formats used towards children and teenagers



The most often used advertising formats towards children are contests, branded websites, premiums (a gift in exchange for the purchase of the product (Rideout, 2014)) and advergames. Contests, banners and branded websites are the most often used advertising formats towards teenagers. Online behavioural advertising and location-based services are the least used advertising formats towards both children and teenagers.

4.3 Vignettes

The results for the responses to the vignettes are divided into three sections: the understanding of advertising formats, ethical acceptability of advertising formats, and the need to inform minors about the commercial intentions of advertising formats. For each section, by means of independent sample t-tests, it was analysed whether significant differences exist between the opinion of advertisers who target children and/or teenagers and advertisers who only target adults.

4.3.1 Understanding advertising formats

According to the respondents, the average age at which minors can understand the different advertising formats is around 12-13 years (Table 4.1). Compared to the other formats, the average age for location-based services, product placement and video advertising is slightly higher (13-14 years), with video advertising being the format with the highest average age indicated. The last column of the table indicates that in-game advertising, product placement and especially video advertising are considered the most difficult formats to understand since for these formats it was indicated most often that minors are not able to understand them. For none of the nine vignettes an acceptable age under 12 years was reported.

Table 4.1: Average age whereupon minors understand different advertising formats.

Advertising formats	Mean age	SD	N= Advertisers who indicated an age	N= Advertisers who indicated: 'Minors not able to understand the advertising format'
Merchandising	12.74	2.58	118	6
Applications	12.40	2.54	115	8
Product Placement (PP)	13.03	2.75	114	12
In-game Advertising (IGA)	12.86	2.69	113	10
Search Engine Marketing (SEM)	12.26	2.59	121	5
Location Based Services (LBS)	13.25	2.68	116	7
Online Behavioural Advertising (OBA)	12.72	2.59	121	6
Advergaming	12.13	2.61	124	5
Video advertising	14.06	2.73	95	28

Almost all interviewees agree that 12 years as an average age to understand these different advertising formats is plausible. The interviewees refer to research that takes 12 years as a threshold for advertising regulations (World Federation of Advertisers, 2007) (quote 1).

Quote 1:

In our company we adhere to the principle that we do not advertise towards children below the age of 12. There are good reasons for making this distinction. Academic research shows that children from the age of 12 onwards can interpret and judge advertising.

Table 4.2 shows that for merchandising, applications and online behavioural advertising, significant differences between respondents who advertise towards minors and advertisers who only advertise towards adults were found. Advertisers who also target minors hold the opinion that, on average, minors can understand merchandising, applications and online behavioural advertising from an earlier age onwards (12 years), compared to advertisers who only target adults (13 years).

Table 4.2: Understanding advertising formats - significant differences between respondents who do and do not advertise to minors

Format	Advertiser group	N	Mean	SD	P
Merchandising	minors	35	12.00	2.62	.013**
	adults	54	13.31	2.24	
Applications	minors	35	11.42	2.69	.004**
	adults	54	13.04	2.32	
Online Behavioural Advertising (OBA)	minors	35	11.97	2.53	.035**
	adults	54	13.14	2.52	

* $p \leq .10$; ** $p \leq .050$

4.3.2 Ethical acceptability of advertising formats

On average, advertising formats are perceived as ethical when targeted at minors from the age of 12-13 years onwards (Table 4.3). Online behavioural advertising, location-based services and applications are perceived as ethically acceptable to use towards minors from an older age onwards (13-14 years). The majority of the interviewees agrees with this opinion. These opinions correspond with the overall perception of advertising professionals that advertising aimed at teenagers is not a problem, whereas it is with children. The results are also in correspondence with 'The Belgian Pledge' and the 'CARU guidelines' (Ji & Lacznik, 2007; The Belgian Pledge, 2017; The Children's Advertising Review Unit, 2009).

Significant differences in the opinions of advertisers who only target adults and those who target minors were only found for applications. The average age whereupon applications are considered as being ethically acceptable to use towards minors by advertisers who target towards minors is 12-13 years. Advertisers who only target adults indicate a significantly older average age, namely 14 years.

Table 4.3: Average age whereupon the use of different advertising formats towards minors is considered as ethically acceptable

Advertising format	Mean age	SD	N= Advertisers who indicated an age	N= Advertisers who indicated: 'advertising format morally/ethically not acceptable'
Merchandising	12.62	3.36	115	9
Applications	13.44	2.91	111	12
Product Placement (PP)	12.85	3.36	114	12
In-game Advertising (IGA)	12.85	3.66	108	15
Search Engine Marketing (SEM)	12.76	3.33	119	7
Location Based Services (LBS)	14.73	2.94	102	21
Online Behavioural Advertising (OBA)	13.52	3.30	116	11
Advergates	12.48	3.32	123	6
Video advertising	12.32	3.89	97	26

4.3.3 Informing minors about the commercial intent of advertising formats

The average age from which minors should be informed about the commercial intent of advertising formats indicated is around 9-10 years (Table 4.4). The age is lower than the average age of 12 years to understand different advertising formats and to use the different formats in an ethical way. Some advertisers indicate that it is not necessary to inform minors about the commercial intent of advertising. This is especially the case for in-game advertising, advergates, video advertising and product placement.

Table 4.4: Average age whereupon minors should be informed about the commercial intent of advertising formats.

Advertising format	Mean age	SD	N= Advertisers who indicated an age	N = Advertisers who indicated: 'No need to inform about commercial intent'.
Merchandising	9.88	3.37	105	7
Applications	9.82	3.29	110	1
Product Placement (PP)	9.9	3.25	101	10
In-game Advertising (IGA)	10.52	3.61	93	14
Search Engine Marketing (SEM)	9.92	3.18	110	8
Location Based Services (LBS)	10.68	3.36	98	3
Online Behavioural Advertising (OBA)	10.43	3.39	107	8
Advergames	9.86	3.28	109	12
Video advertising	10.15	3.58	85	12

Some interviewees would not inform children early on, whereas others hold the opinion that children have to be informed from an even earlier age onwards (e.g. 6 years). Quotes 2 and 3 illustrate these mixed opinions.

Quote 2:

The ages indicated are quite old. I personally think that children can be gradually informed from an earlier age on, let's say six years. The explanation given to a 6-year old cannot be the same as the one given to a 9-year old or 12-year old child. (...) I think there are sufficient courses to integrate advertising education in school. Especially since advertising has become more complex. Additionally, parents do not always understand these advertising types themselves.

Quote 3:

It is important to take into account the ability of children to understand the different advertising formats before informing them about it. Otherwise, it would work contradictory. I would say up to eight years old it has to be the parent who explains advertising formats

Compared to advertisers who only target advertising towards adults, advertisers who target minors hold the opinion that, on average, it is desirable to inform minors about the commercial content from a younger age onwards. This is especially the case for novel, integrated advertising formats which are more difficult to recognise (product placement, in-game advertising and video advertising) (Table 4.5).

Table 4.5: Information about commercial content – significant differences between respondents who do and do not advertise to minors

Format	Advertiser group	N	Mean	SD	P*
Product Placement	minors	33	9.06	2.65	.012**
	adults	47	10.81	3.45	
Video advertising	minors	24	8.79	3.17	.052*
	adults	43	10.47	3.40	
In-game advertising (IGA)	minors	31	8.97	2.93	.011**

* $p \leq .10$; ** $p \leq .050$

4.4 Ethical data collection and data protection policy

According to the vast majority of the respondents, a proper data collection and protection policy should provide verification of the age of the children (93.8%) or teenagers (88.7%), allow verification of the status of the children's (80.4%) or teenagers' (71.1%) parents or legal guardians, and should provide clear information concerning the use of cookies and the possibility of disabling them to children (97.9%) and teenagers (95.9%). A substantial majority of the respondents (79%) agrees that the collection of personal information of children should be prohibited. Half of the advertisers (56.8%) agrees with this statement if teenagers are concerned. One in four (25.2%) disagrees if teenagers are the target group and 10.5% disagrees if children are the target group. If children (teenagers) are considered as a target group 71.5% (55.8%) agrees and 18.9% (25.3%) disagrees.

A majority (74.7%) of the advertisers agrees that children should not be allowed to register on brand websites or mobile platforms without permission of their parents or legal guardians (11.6% disagrees). If teenagers are considered as a target group the results are mixed (41.1% disagrees and 33.7% agrees). Advertisers think that it is important to notify parents or legal guardians if personal information from their children (87.4%) and teenagers (76.8%) is processed. If children are a target group, collection of personal data is perceived as unethical by a majority of the advertising professionals (84.2%). The results for teenagers are mixed (42.1% agrees, 57.9% disagrees). The majority of advertisers agrees with the statement that parents should give their permission for the data collection of their children (89.5%) and teenagers (78.9%).

4.5 Regulation and awareness building

The vast majority of advertising professionals do not agree with the statement that advertising towards children (76.7%) and teenagers (69.7%) should be regulated exclusively by means of self-regulation, or exclusively by means of legislation (children: 62.6%; teenagers: 69.7%). The majority of the advertising professionals agrees that advertising towards minors should be regulated by a combination of self-regulation and legislation for both children (77.8%) and teenagers (72.7%). The opinions of the interviewees with respect to the regulation of commercial communication towards minors are mixed. Quotes 4 and 5 illustrate both opinions.

Quote 4:

With self-regulation you have certain mechanisms at work which work good. I think this type of regulation is the most efficient one. It is impossible to have all rules made by the legislator. In my opinion you have a stronger case if companies are willing to impose certain restrictions upon themselves and have these restrictions monitored by an independent institution. Regulation exclusively through legislation requires that the government has to invest in monitoring, because making laws without any type of monitoring does not makes sense. Therefore I think it is much more efficient to work with self-regulation. This requires a certain level of governmental confidence in companies. I do think however that companies take their responsibility seriously.

Quote 5:

'Legislation should set certain rules, and self-regulation can go further. Regulation exclusively through self-regulation, especially if it is not monitored, does not make a lot of sense.'

Most advertisers agree with the statement that the government should strive for awareness building to promote advertising literacy amongst children and teenagers (both 66.7%) as with the statement that it is the educational system's duty to promote advertising literacy amongst children (76.8 %) and teenagers (73.8%).

5 Conclusion and discussion

In general, all advertising professionals acknowledge that children are a vulnerable advertising target group. Teenagers are considered to be mature enough to identify advertising and to understand the commercial intention behind advertising formats. This finding is in line with John (1999) who noted that from the reflective stage in consumer socialisation onwards (age 11-12), teenagers have the skills to identify and understand traditional advertising. Protecting minors from persuasive communication is therefore more important for children (6-12 years) than for teenagers (Eagle, Bulmer, & De Bruin, 2003). The results from the current study show that advertising professionals hold more or less the same perception for integrated and interactive advertising formats as for traditional ones. This is remarkable since their characteristics make it harder to identify them as advertising and recognise their persuasive intent.

Contests, brand websites and premium offers are the most often used advertising formats towards children. Contests, banners and branded websites are used mostly towards teenagers.

Advertisers consider minors capable of understanding novel advertising formats on average from 12 years onwards. In the study of Harris Interactive (Geraci, 2004; Grimm, 2004) the average age whereupon minors were considered to view advertising critically was nine years. However, this study does not provide a clear definition of which type of advertising was studied. Martínez (2016) found that advertisers perceive children capable of identifying and understanding the intent of advertising at ten to twelve years of age.

Novel advertising formats are considered ethically acceptable to use towards minors from the age of 12-13 years onwards. These results are substantially different from Harris Interactive's

study (Geraci, 2004; Grimm, 2004) in which marketers state that it is appropriate to target advertising to children at age seven. Advertising professionals in our study indicate that the average age to inform minors about the commercial intentions of novel advertising formats age is around 9-10 years. This is remarkable since the average age whereupon advertising is considered as ethical as well as the age whereupon minors are considered to be capable to understand the different advertising formats is 12-13 years. It appears that advertisers would inform minors about advertising even before they consider minors to be able to understand how novel advertising formats work. This is somewhat counterintuitive, since one would expect that it is only meaningful to inform or explain something to an individual, when this individual can comprehend what is explained. In the current study, formats for which it was indicated that it is not necessary to inform minors about the commercial intention are in-game advertising, advergames and video advertising. These results are also remarkable because these advertising formats are characterised by their integrated nature, which makes it more difficult to recognise these formats as advertising. One would expect that especially for these integrated, implicit advertising formats it is necessary to disclose the commercial intent to minors.

The majority of the advertisers agrees that a proper policy should provide a verification of the ages of children, allows verification of the status of the parent or legal guardian and provides clear information concerning the use of cookies and the possibility of disabling them. According to the majority of advertising professionals, parents should give their permission for the data collection of both their children and teenagers.

A combination of both legislation and self-regulation to regulate advertising aimed at minors is preferred by the respondents, and governments and schools have a responsibility to make children advertising literate.

6 Theoretical implications

The results of our study show that advertisers' perceptions are still based on old theories about the different stages of consumer socialisation in childhood (John 1999) and models about children's cognitive development (e.g. the Persuasion Knowledge Model (Friestad and Wright 1994) and that they still adhere to the principles in these models and theories that are based on traditional media. However, contemporary advertising formats as the ones explored in the current study differ from these traditional media because of their integrated and/or interactive characteristics. However, these characteristics of novel advertising formats do not seem to be

taken into account when it comes to the usage and ethical acceptability of these formats when targeted at children and teenagers. As such, traditional models still function as standards for today's advertisers' perceptions, despite the fact that the way minors encounter advertising has changed a lot over the last decades and it is questionable whether these theories and models still apply to the use of contemporary advertising formats.

It appears that advertisers are satisfied with just complying with the existing ethical guidelines and rules (e.g. it is allowed to advertise to children from the age of 12 onwards) and that they are not questioning whether they should take the lead themselves in updating the ethical guidelines or apply stricter ones. As such they apply the 'ethics code' view in ethical decision making: they adhere to the law and to standards in ethical guidelines (De Pelsmacker, Geuens, and Van den Bergh 2017; Pickton and Broderick 2005). Nevertheless, given the vulnerability of minors, adhering to the 'consumer sovereignty' principle (taking the vulnerability, decision making process and the available information to the consumer into account) or to the 'caveat venditor' principle (doing everything in the best interest of the consumers) might be more appropriate.

Moreover, it is even possible that the advertisers who participated in this study are more engaged with the subject of ethical advertising aimed at children and teenagers and are more ethically concerned than advertisers who did not participate.

7 Managerial and public policy implications

The results of the current study can inform advertising professionals and public policy. Generally speaking, advertisers seem to be well aware of the vulnerability of especially young children when it comes to coping with (novel) advertising formats. The majority holds the opinion that children do not have a good understanding of new advertising formats, that ethical concerns when advertising towards especially young minors should be taken into account, and, overwhelmingly, that especially children (not so much teenagers) should be protected against the inappropriate collection and use of personal data. Apparently, they are well aware of the measures that are taken to protect minors (for instance especially in case of unhealthy products) and to develop their advertising literacy, and they acknowledge to support them. This provides a solid basis for further developing these initiatives. Especially the educational system has a role to play, since advertisers hold the opinion that advertising literacy in children should be developed early on in primary school. Children's persuasion knowledge can be enhanced by

teaching programmes that focus on advertising literacy education and that learn how minors should reflect critically about advertising messages (Nelson, 2016).

However, important improvements can still be made. In our sample, 24 respondents indicate that they target children, and half of both the respondents and the interviewees find this appropriate. This goes against (self-)regulatory measures in the Belgian Pledge and CARU guidelines. Advertising professional associations and the government could and should make more efforts to make professionals aware of these rules. Twenty to 25% of the respondents find it appropriate to collect personal information about children younger than 12, and to allow children to register on online platforms without parental consent. This is also an area for further improvement.

Integrated and/or online advertising formats are, on average, perceived by advertising professionals as ethically appropriate to use towards minors from the age of 12-13 years onwards. However, for professionals who are currently advertising towards minors, this age is significantly lower. Public policy and advertising associations have to remain vigilant as to the ethical values of companies that market products targeted at children.

Importantly, in their appreciation of appropriateness to advertise (differently) to children and teenagers, advertising professionals seem to be largely inspired by their experience and appreciation of traditional advertising, and by the rules and regulations that are now in place. They implicitly assume that the implications of advertising today do not differ from the situation in the past when only traditional advertising formats were used. They do not seem to realize that novel integrated and interactive formats that develop brand commitment in a different way than before may constitute different challenges than traditional advertising with respect to how children and teenagers understand and process them, and what this entails with respect to the development of advertising literacy and ethical considerations with respect to these novel formats. This constitutes a major challenge for advertising organisations and public policy. Due to the specific nature of these novel advertising formats, there is an urgent necessity to revise what 'ethical advertising' aimed at minors means and to protect minors against the implicit influence of these novel formats. This is a task for both public policy and the advertising industry.

8 Limitations and further research

The response rate of the survey was relatively low (90 out of 2,614 fully completed and 161 partly completed the survey). This is common in on online surveys (Sheehan, 2002) and if the subject of the survey is a rather sensitive topic, as is the case with the topic of the current study, it can be expected that this will affect the response rate negatively (Fan & Yan, 2010). Nevertheless, due to the possibility of non-response bias, one should be careful with broad generalizations of the study results. Moreover, the advertising professionals completed the survey voluntarily. This might have resulted in reaching only those advertisers who have a particular interest into the subject of advertising literacy of minors. The selection of respondents for the in-depth interviews partly compensated for this by also interviewing advertising professionals who did not participate in the survey.

Besides differences between children and teenagers, with regard to cognitive development, there might also be differences within these age categories. Future research could make this more fine-grained distinction.

Due to the limited information available in the description of the vignettes it is likely that certain situational factors which could have had an influence on the respondents' answers were not provided. However, the in-depth interviews provided a somewhat more nuanced and deeper insight into these situational factors.

The researchers tried to control for socially desirable answers by making the survey anonymous. Nevertheless, a certain degree of social desirability bias cannot be excluded.

9 Appendices

9.1 Overview of advertising formats in vignettes

Product Placement on television	In a television series, a particular brand of soft drink is consumed often, and the logo is brought into focus. The brand has paid for the soft drink to be used in the television series.
In-game advertising (IGA)	In a popular racing game, players can choose from several existing brands of cars, and billboards advertising these car brands appear along the roadside. The car brands have paid the developers of the game to have their brands used in the racing game.
Search Engine Marketing (SEM)	Lucas would like to know more about the rules of tennis. To this end, he types 'tennis' as a search term in Google. A large number of advertisements for sports brands related to the search term appear in a sidebar next to the actual results.
Location Based Services (LBS)	Marie goes shopping with some of her friends during the school holiday. As they approach a popular chain store, she receives a text message on her mobile telephone containing a promotional code for a chain store.
Online Behavioural Advertising (OBA)	Tom is searching the internet for camping equipment for his youth movement's annual camp. When he then looks through Facebook, the News Feed contains advertisements related to camping equipment.

Chapter 4: Advertisers' perceptions

<p>Advergames</p>	<p>To promote the newest product in its line, a brand has developed a game that can be played on the brand's website. While playing this game, the game elements are related to the product and the brand, and players attempt to capture as many brand logos as they can.</p>
<p>Video advertising</p>	<p>A video on YouTube shows a child and a father singing the soundtrack of the latest Disney movie together. Disney paid the child's father to post the video online for the purpose of advertising. The Disney logo does not appear anywhere in the music clip, and there is no statement that the video is part of an advertising campaign.</p>
<p>Advertising in applications</p>	<p>Lori has her own tablet. Every day, she plays a music quiz that is installed as an application on her tablet. The music quiz application was a free download, with advertising appearing between the questions. A large amount of the advertising consists of ads for the latest CD from her favourite group.</p>
<p>Merchandising of popular figures in a virtual world</p>	<p>Sam has installed an application from a media company on his parents' tablet. The application is a virtual world in which he comes into contact with various media figures and in which he and his friends try to complete challenges in this virtual world successfully. A great deal of merchandising is associated with these media figures. For example, the media figures also appear in television programmes, they are present in amusement parks and they are portrayed on many products for children and teenagers.</p>

9.2 Survey

E-mail:

Dear Sir/Madam,

This survey is part of an extensive research project on advertising literacy amongst children and teenagers. Advertising literacy refers to a consumer's personal knowledge concerning advertising, the persuasive intentions of advertising and the advertising techniques used. This questionnaire is directed towards advertisers (people in the world of advertising), in order to gain insight into their opinions on this subject matter.

To participate, please click on the following [link](#).

The survey will be online until Monday the 4th of May 2015.

Thank you in advance for your cooperation.

Your responses will be completely anonymous, and they will be processed confidentially

Please do not hesitate to contact us if you have any further questions.

Kristien.Daems@uantwerpen.be

info@AdLit.be

www.adlit.be

Actual survey

Language choice:

Kies uw taal alstublieft. Choisissez votre langue s'il vous plaît. Please select your language.

- Nederlands
- Français
- English

Introduction survey:

Dear Sir/Madam,

The purpose of this survey is to identify the perceptions of advertisers and experts in the area of advertising and marketing with regard to advertising aimed at minors. In the context of an extensive research project on advertising targeting minors, it is important to be aware of the perceptions of advertisers and advertising experts regarding advertising practices aimed at children and teenagers.

Your responses will be completely anonymous, and they will be processed confidentially. This survey is also intended for individuals and companies who are not currently advertising to children or teenagers, gauging the perceptions and opinions of marketers in general. Some questions concern your personal opinion, while others should be viewed from a commercial perspective.

Thank you in advance for your cooperation.

Please do not hesitate to contact us if you have any further questions.

Kristien.Daems@uantwerpen.be

info@AdLit.be
www.adlit.be

Question 1

The following section presents several situations concerning various forms of advertising aimed at minors. They are followed by several questions related to these situations.

Understanding a form of advertising:

'Understanding a form of advertising' means that a person is able to recognise the form of advertising as advertising, with the understanding that the purpose of this form of advertising is to persuade people.

Ethical aspect

In this survey, the term 'ethically acceptable' is used to refer to the 'appropriateness' or the 'moral acceptability' of directing particular forms of advertising to children or teenagers.

Question 1 (Vignettes)

Respondents had to answer 2 (or 3 see method section) questions for each vignette.

Please indicate by means of a slider (6-18 years) from which age onwards you consider children able to understand the advertising format described in the vignette.

Please indicate by means of a slider (6-18 years) from which age onwards you the usage of the advertising format described in the vignette as ethically appropriate to use towards minors

Please indicate by means of a slider (6-18 years) from which age onwards you consider children should be informed about the commercial intent behind the advertising formats described in the vignette.

- In a television series, a particular brand of soft drink is consumed often, and the logo is brought into focus. The brand has paid for the soft drink to be used in the television series.
- In a popular racing game, players can choose from several existing brands of cars, and billboards advertising these car brands appear along the roadside. The car brands have paid the developers of the game to have their brands used in the racing game.
- Lucas would like to know more about the rules of tennis. To this end, he types 'tennis' as a search term in Google. A large number of advertisements for sports brands related to the search term appear in a sidebar next to the actual results.
- Marie goes shopping with some of her friends during the school holiday. As they approach a popular chain store, she receives a text message on her mobile telephone containing a promotional code for chain store.

- Tom is searching the internet for camping equipment for his youth movement's annual camp. When he then looks through Facebook, the News Feed contains advertisements related to camping equipment.
- To promote the newest product in its line, a brand has developed a game that can be played on the brand's website. While playing this game, the game elements are related to the product and the brand, and players attempt to capture as many brand logos as they can.
- A video on YouTube shows a child and a father singing the soundtrack of the latest Disney movie together. Disney paid the child's father to post the video online for the purpose of advertising. The Disney logo does not appear anywhere in the music clip, and there is no statement that the video is part of an advertising campaign.
- Lori has her own tablet. Every day, she plays a music quiz that is installed as an application on her tablet. The music quiz application was a free download, with advertising appearing between the questions. A large amount of the advertising consists of ads for the latest CD from her favourite group.
- Sam has installed an application from a media company on his parents' tablet. The application is a virtual world in which he comes into contact with various media figures and in which he and his friends try to complete challenges in this virtual world successfully. A great deal of merchandising is associated with these media figures. For example, the media figures also appear in television programmes, they are present in amusement parks and they are portrayed on many products for children and teenagers.

Information Question 2:

There are several ways to promote advertising literacy amongst minors.

- Legal regulations: Regulations concerning advertising to minors are established by law.
- Self-regulation by the advertising industry: The advertising industry establishes, implements and enforces its own regulations concerning advertising to minors.
- Sensitisation by the government: The government strives to sensitise children and teenagers to advertising literacy, thereby promoting advertising literacy.
- Sensitisation through the education system: In schools, classroom attention is devoted to various forms of advertising, with the objective of promoting advertising literacy amongst students.

Chapter 4: Advertisers' perceptions

Question 2:

Please indicate the extent to which you agree with each of the following statements.

Children (6-12 years)

- Commercial communication with regard to children (6-12 years) should be regulated exclusively through self-regulation.
- Commercial communication with regard to children (6-12 years) should be regulated exclusively through legislation.
- Commercial communication with regard to children (6-12 years) should be regulated through a combination of legislation and self-regulation.
- The government should strive for sensitisation in order to promote advertising literacy amongst children (6-12 years).
- The education system has a duty to promote advertising literacy amongst children (6-12 years).

Teenagers (13-18 years)

- Commercial communication with regard to teenagers (13-18 years) should be regulated exclusively through self-regulation.
- Commercial communication with regard to teenagers (13-18 years) should be regulated exclusively through legislation.
- Commercial communication with regard to teenagers (13-18 years) should be regulated through a combination of legislation and self-regulation.
- The government should strive for sensitisation in order to promote advertising literacy amongst teenagers (13-18 years).
- The education system has a duty to promote advertising literacy amongst teenagers (13-18 years).

Question 3: Data protection

A proper data-protection policy on a social media platform that is accessible to children (6-12 years)...

- ...provides verification of the ages of children.
- ...allows verification of the status of the parent or legal guardian.
- ...provides clear information concerning the use of cookies and the possibility of disabling them.

A proper data-protection policy on a social media platform that is accessible to teenagers (13-18 years)...

- ...provides verification of the ages of teenagers.
- ...allows verification of the status of the parent or legal guardian.
- ...provides clear information concerning the use of cookies and the possibility of disabling them.

Question 4:

Please indicate the extent to which you agree with each of the following statements.

Children (6-12 years):

- Children (6-12 years) should not be allowed to register with a brand website or mobile platform without permission from a parent or legal guardian.
- The collection of personal information from children (6-12 years) should be prohibited.
- Personal information from children (6-12 years) should not be collected, processed or used without permission from their parents or legal guardians.
- It is important for parents or legal guardians to be notified of the processing of personal information from their children (6-12 years).

Teenagers (13-18 years):

- Teenagers (13-18 years) should not be allowed to register with a brand website or with a mobile platform without permission from a parent or legal guardian.
- The collection of personal information from teenagers (13-18 years) should be prohibited.
- Personal information from teenagers (13-18 years) should not be collected, processed or used without permission from their parents or legal guardians.
- It is important for parents or legal guardians to be notified of the processing of personal information from their teenagers (13-18 years).

Question 5:

Please indicate whether you agree with each of the following statements.

- The collection of personal information from children (6-12 years)...
 - ...is an ethically and morally acceptable strategy.
 - ...is a strategy for which it is important to receive permission from parents or legal guardians.
- The collection of personal information from teenagers (13-18 years)...
 - ...is an ethically and morally acceptable strategy.
 - ...is a strategy for which it is important to receive permission from parents or legal guardians.

Question 6:

- Does the company you work for advertise to minors (< 18 years)?
 - Yes (forward to additional questions)
 - No (end of the survey)

For advertising creatives:

- Does the agency you work for create advertising aimed at minors (< 18 years)?
 - Yes (forward to additional questions)
 - No (end of the survey)

Question 7:

- To which group of minors does the company you work for advertise?
 - Only to children (6-12 years)
 - Only to teenagers (13-18 years)
 - To both children and teenagers

For advertising creatives:

- For which group of minors does the agency you work for create advertising?
 - Only to children (6-12 years)
 - Only to teenagers (13-18 years)
 - To both children and teenagers

Information question 8:

Definitions of difficult forms of advertising:

In-game advertising:

The term 'in-game advertising' (IGA) refers to advertisements for products or brands that are integrated into existing digital computer games.

Advergaming:

Advergaming are games that have been designed and created to promote an existing brand, product, service or idea and that is offered free by the advertiser. Advergaming are thus designed specifically as advertising. The product or brand being advertised plays a prominent role in these games.

Search-engine marketing:

In this form of advertising, an advertiser purchases a search term in a search machine. Whenever this search term is entered, a link to the advertiser's website is displayed in proximity to the results that have been retrieved.

Applications:

Applications are programmes that can be downloaded and installed on a smartphone or tablet. These programmes can be either games that contain advertising or specific brand applications.

Location-based advertising:

This is the targeted transmission of advertising messages to receivers according to their current locations. This form of advertising uses GPS or Bluetooth technology. One example is when a chain store sends discount codes in text messages to individuals who are in the vicinity of one of the chain store's locations.

Question 8:

Please indicate which of the following advertising formats the company you work for uses to target children and/or teenagers.

(Respondents were exposed to the target group they indicated that their company targets advertising to by means of a screening question).

Advertising formats
Free gift with purchase of the product
Collection campaigns
Contests
Product placement on television
Email
Banners
Brand websites
Search engine marketing
Online behavioural advertising (OBA)
In-game advertising
Advergames
Advertising on video sites (e.g. YouTube) and visual social platforms (Instagram)
Personalised advertising
Location-based services

Question 9:

Which market does your company operate in?

- Financial
- Soft drinks (or other beverages)
- Mobility
- Education
- Amusement parks
- Fashion and ready-to-wear articles
- Retail
- Toys
- Telecommunications
- Food
- Media and entertainment
- Other:

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Question 10: Which department of the company do you work in?

- HRM
- Legal department
- Marketing
- Communications
- Employee training
- Public affairs
- Other:
- I would rather not say

Question 11:

What is your age?

Question 12:

What is your gender?

- Male
- Female

Question 13:

Would you be willing to participate in an in-depth interview concerning advertising literacy amongst children and teenagers?

- Yes
- No

Question 14:

Please use the field below to enter any specific comments you might have concerning advertising to minors or about this questionnaire.

This is the end of the survey. Thank you for your cooperation.

9.3 Topic guide in-depth interviews

Perception

- What is your general perception of advertising aimed at minors (younger than 18 years old)?
- Is there a difference regarding the ethical aspect of advertising according to the target group, children (6-12 years old) and teenagers (13-18 years old) at which the advertising is aimed?
- Is there a difference between traditional advertising (a television spot, contest, etc) and new advertising formats such as product placement, banners, search engine marketing with reference to their ethical and morally acceptable character?
- Is it allowed, in your opinion, to use these different types of advertising towards
 - o Children (6-12 years)
 - o And teenagers (13-18 years old)?
- Why (not)?
- In your opinion, do children understand new advertising formats such as product placement, search engine marketing, advergames or online behavioural advertising?
- In your opinion, do teenagers understand new advertising formats such as product placement, Search Engine Marketing, advergames or online behavioural advertising?
 - o If yes: why?
 - o If no: Why not? Wherein lies the difficulty to recognize and identify these advertising formats for minors do you think?

Ethical and moral acceptability

- Are advertisers allowed to target advertising to children between 6 and 12 years old? If so, why? If not, why not?
- Are advertisers allowed to target advertising to teenagers between 13 and 18 years old? If so, why? If not, why not?
- Are there certain types of advertising that are appropriate to use at children between 6 and 12 years old? If so, which ones?
- Are there certain types of advertising that are appropriate to use at teenagers between 13 and 18 years old? If so, which ones?
- Which types of advertising are not appropriate to use
 - o To children (till the age of 12 years)?

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- To teenagers (till the age of 18 years)?
- Do you sometimes have doubts concerning advertising aimed at children?
 - If so, can you give some examples of these doubts?
- Do you sometimes have doubts concerning advertising aimed at teenagers?
 - If so, can you give some examples of these doubts?

Does the company you work for advertise to minors? Why (not)?

If so:

- Which target group does the company advertise to? Children and/or teenagers?
- Can you explain why specifically this/these target group(s) is/are chosen?
- The age based division between children (till the age of twelve years old) and teenagers (till the age of eighteen years old) is chosen because this age division corresponds to the difference between primary education and secondary education in Belgium. Does the company you work for utilise another age based division? If so, why is this and which age based division does the company use?
- Does the company you work for utilise a minimum age limit to target advertising activities to? Why/why not?
- Which types of advertising does the company you work for use at children (6-12 years old)?
- Which types of advertising are used mostly at children?
- Which types of advertising does the company you work for use at teenagers (13-18 years)?
- Which types of advertising are used mostly at teenagers?
- Is there a difference regarding the type of advertising (traditional or new advertising formats) the company uses to children and teenagers?
 - If so: why exactly, what is the reason behind this choice? (age, cognitive skills, not appropriateness of the advertising, no surplus value for the target group....)
- Does the company you work for use especially traditional advertising or are new advertising formats (such as: pp, search engine marketing, advergames etc.) used as well?
- Is there a difference amongst the usage of traditional and new advertising formats according to the age group? Children and/or teenagers?
- Which advertising formats are used mostly at children?

- Which advertising formats are used mostly at teenagers?
- Are there advertising formats which are explicitly NOT used at children? If so, which ones? Why are these advertising formats not used at children? Are these advertising formats used at adults?
- Are there advertising formats which are explicitly NOT used at teenagers? If so, which ones? Why are these advertising formats not used at teenagers? Are these advertising formats used at adults?

Data collection and privacy

- Does the company you work for collect data through social media/ websites/....? If so, do the parents or the legal guardians first have to give their permission? In which manner is this parental permission verified? Are data from the parents collected as well?
- Does the company you work for collect data about the surfing behaviour of children/teenagers on the Internet?
- Does the company you work for collect personal data about children/ teenagers?
 - o If so, which data are collected?
 - o For which purposes are these data used?
 - o In which manner is these data collected?
 - Do parents/legal guardians have to give their permission for this data collection? If so, from which age onwards do parents have to give their permission?
 - Till which age is the parental permission needed?
 - o How do parents have to give their permission? (click on a link, receiving an email...)
 - o How does the company check/controls for the age of children and teenagers?
 - o In which manner does the company check whether the parents are the real parents?
 - o Is there a way in which children/teenagers/parents can control their data?
 - o In which manner can children/teenagers/parents recall/revoke their given permission?
 - o Who can consult these data?
 - o Do you have a privacy policy and terms and conditions?

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In your opinion: Is it allowed to gather personal data of **children** till the age of twelve for commercial purposes? Why/why not?

In your opinion: Is it allowed to gather personal data of **teenagers** till the age of eighteen for commercial purposes? Why/why not?

Do you think it is necessary that parents first need to give their permission before children or teenagers can register on an online/mobile platform? Why/why not? Is this different according to the type of platform (mobile or online)?

Do you consider the gathering of children's and teenagers data as ethically acceptable? Why/Why not?

Results survey

In a survey we conducted some advertising practices were shown through a situation sketch. The question asked were whether minors are able to understand and recognise these advertising practices and whether these practices are ethically acceptable if used towards minors.

The results of these questions revealed that the number of persons considering the use of an advertising method is ethically acceptable varied among the different situations presented.

On the other hand, the results show that the majority of advertisers thinks that the average age at which minors can understand the different advertising formats lies around 12 years of age. What is your opinion about that? Can different advertising formats be understood from one particular age onwards? Why/why not? Where do the difficulties lie in particular advertising formats?

Are there differences between different advertising formats concerning their ethical appropriateness towards children and teenagers? If so, which? Why?

The average age from which minors onwards need to be informed from the commercial character of advertising was the same for different advertising formats, namely ten years old. So from ten years onwards children need to be informed of the different advertising formats. Do you agree with this? What is your opinion about such an age limit from which on children need to get informed about the purposes of advertising?

Do we need to pay special attention to the difference of different advertising format or not?

Education

Is there a role for the educational system to inform children about advertising, the different types of advertising, its purposes and so on?

Is it the task of the educational system to provide this information to children?

Government

Is it the governments' task to learn children about the purposes of advertising? Why/why not?

Does advertising literacy need to be government by legal regulation, self-regulation of the advertising industry or a combination of both? Why?

Parents

Is it the task of parents to educate their children about advertising? If so, how do you see the role of parents regarding advertising literacy?

Is it mainly the task of parents, or is advertising literacy mainly a concern of the educational system and the government?

Do you have any further questions or would you like to add something?

Chapter 5

Parents' concerns about, and parental mediation of contemporary advertising on different media devices. The effects of children's age, and parents' gender and educational level

Chapter 5 Parents' concerns about, and parental mediation of contemporary advertising on different media devices. The effects of children's age, and parents' gender and educational level

Abstract

By means of an online survey with 340 parents (200 with young children aged 6-12 and 140 with teenagers aged 13-18 years) this study investigates parental concerns regarding contemporary advertising formats, parental mediation strategies used for different media devices, and the influence of children's age, and parents' gender and educational level. Parents consider youngsters able to understand advertising on average from the age of 13 years onwards and consider the use of contemporary advertising formats ethically appropriate from the same age. They would inform youngsters about the commercial intent behind contemporary formats on average from the age of 10 years onwards. Young children's (6-12) media use is more mediated by parents than that of teenagers (13-18). The more mobile a media device is (e.g. mobile phone, tablet), the less youngsters' media use of these devices is mediated. Mediation is more implemented on traditional media devices and advertising formats (e.g. television). Restrictive mediation is the most often used mediation strategy to both children and teenagers, while discussing advertising techniques is the least used strategy. Mothers and more highly educated parents apply more parental mediation than fathers and lower educated parents.

1 Introduction

During the last decades, the media environment has changed due to digitalisation. Compared to decades ago, beside television and PCs, media devices such as laptops, tablets and mobile phones appeared. Consequently, people's media use, has drastically changed. This is also the case for youngsters. Children and teenagers are heavy users of online media and online content (Common Sense Media, 2017a). For instance, American tweens (8-12 years) use entertainment media up to six hours per day (excluding their time spend on media for school or homework) and this increases up to nine hours per day in teenagers (13-18 years) (Common Sense Media, 2017b). The use of mobile media devices in American children's (< 8year) lives has tripled from 15 minutes per day in 2013 to 48 minutes per day in 2017 (Common Sense Media, 2017a). In the United Kingdom, television remains the most popular media device among young

children (5-11), who watch on average 13.5 hours per week on a television set, while teenagers more often use their mobile phone (Ofcom, 2017). Teenagers in the UK (12-15 years) spend most of their time online (approximately 21 hours per week), followed by a mobile phone (18 hours) and watching television on a TV set (14 hours) (Ofcom, 2017). In Flanders (Belgium), the context of the current study, all households with young children have a television at home, 66.6% of the children between 9 and 12 years old have their own laptop, 40.9% have their own mobile phone and 17.9% have their own tablet (Apestaartjaren, 2016). The mobile phone is the most popular media device among teenagers (12-18 years), with 92% possessing their own. Almost 58% have their own laptop, and 41.6% have their own tablet (Apestaartjaren, 2016). These numbers illustrate the heavy media use of youngsters and their change in preference for media and media devices throughout childhood and adolescence.

Advertisers take advantage of youngsters' use of a variety of media devices and their constant connectivity by adjusting their campaigns to it and by specifically targeting both children and teenagers as a target group for their advertisements. Consequently, youngsters encounter advertising messages on various – and increasingly online – media, and advertising is ubiquitously present in their lives (Clarke & Svanaes, 2012; Common Sense Media, 2017b; Owen et al., 2013). Along with this, novel advertising formats have emerged (Rideout, 2014). Contemporary advertising formats differ from traditional advertising in three respects: integration, interactivity and the collection of personal data. Integrated advertising formats embed a commercial message in an informative or entertaining content, resulting in blurred boundaries between the commercial message and the media content itself, such as in-game advertising, i.e. brands integrated in an online game (Moore & Rideout, 2007), or sponsored posts, articles, videos, or links on websites, social networking sites or search engines (Wojdynski & Golan, 2016). Other advertising formats stimulate interaction with a brand, leading to content that has interactive and engaging features, or creates an entertaining experience which can result in unconscious reinforced persuasion, for instance interactive brand websites or branded applications (Chen et al., 2013; Liu & Shrum, 2009; Rideout, 2014). Often, integration and interaction are combined in one format, for instance an online game in which brands are integrated and players are stimulated to interact with it (for instance a racing game with an existing car model). Moreover, contemporary advertising formats often collect personal data or persuade individuals to disclose personal information by requesting them to register or to create an account on websites or applications (Cai & Zhao, 2013). This information is then

used for targeted advertising (e.g. online behavioural advertising) (Boerman, Kruikemeier, et al., 2017).

Children's advertising literacy and persuasion knowledge develops throughout childhood with cognitive development and increased advertising experience (Friestad & Wright, 2005; John, 1999; Moses & Baldwin, 2005; Roedder, 1981). In a traditional advertising context it is argued that only from about 12 years onwards, youngsters have fully developed advertising knowledge that allows them to recognise and identify advertising, understand the selling intent and to comprehend the advertiser's persuasive intent (John, 1999). Indeed, children have been shown to be more susceptible for advertising's persuasion and advertisers' influence than teenagers or adults (Hudders et al., 2017; Rozendaal et al., 2010; Verhellen et al., 2014). Because of the 'hidden' nature of many contemporary advertising formats, it has become increasingly difficult to recognise and identify contemporary commercial messages as advertising and to understand their persuasive intent (Friestad & Wright, 2005; Moore & Rideout, 2007; Nairn & Dew, 2007). Children also do not always have the ability to understand how registration and data collection works and are not aware of the purposes behind this strategy (selling this data to other companies or adjusting future advertising messages to it) (Cai & Zhao, 2013).

Parents or legal guardians are crucial stakeholders in the debate about media use and children's exposure to media content and advertising. Research indeed shows that parents are concerned about their children spending too much time with media and their exposure to materialism and advertising (Common Sense Media, 2017a). Therefore it is not surprising that parents have expressed concerns about specific advertising characteristics, purposes and negative and potential harmful effects of contemporary advertising formats. Aspects of these concerns are the amount of advertising targeted at children (Common Sense Media, 2017a), preference for unhealthy food containing high levels of fat, salt and sugar (so called HFSS products) (Montgomery & Chester, 2009; Newman & Oates, 2014), development of materialism (Buijzen & Valkenburg, 2005), intensified purchase requests (Buijzen & Valkenburg, 2005), unconscious persuasion by implicit, integrated advertising formats or misleading advertising tactics used (Moore & Rideout, 2007), privacy concerns and concerns regarding personal data collection (Cai & Zhao, 2013). Parents need to provide the necessary guidance in their children's media use and advertising education (Spiteri Cornish, 2014). Due to their crucial role in the upbringing of children, insights into the concerns of parents about the appropriateness of advertising strategies targeted at their children and teenagers, and about the way children's advertising literacy should be developed is crucial.

Parents' motivation to mediate their children's media use and advertising exposure is to protect their children from negative effects which might result in harmful outcomes and to encourage their children in instructive learning and positive, beneficial effects (Nikken & Jansz, 2006; Sonck et al., 2013). Parents may use different parental mediation strategies for different media devices to monitor their children's exposure to media content and advertising. Research on parental mediation has focused mainly on different medium types and media devices separately, such as television (Nathanson, 2001; Valkenburg et al., 1999) or internet use (Clark, 2011; Kirwil, 2009; Lee, 2012; Livingstone & Helsper, 2008; Nikken & Jansz, 2014; Shin, 2015; Sonck et al., 2013). Previous studies have also focused on different advertising types separately, such as traditional (television) advertising (Bijmolt et al., 1998; Buijzen, Rozendaal, Moorman, & Tanis, 2008; Buijzen & Valkenburg, 2005; Dens, De Pelsmacker, & Eagle, 2007; Fujioka & Austin, 2003; Watkins et al., 2016), online advertising (Spiteri Cornish, 2014), advergaming (Evans, Carlson, & Grubbs Hoy, 2013), advertising in video games (Shin & Huh, 2011) and social network games (Vanwesenbeeck et al., 2016). However, investigating and comparing parental mediation on different media devices simultaneously can unravel potential differences in parental mediation strategies used for media devices with different characteristics. For instance, given the importance and widespread use of mobile media in children's and teenagers' lives, it is relevant to study whether different parental mediation strategies are used towards mobile (e.g. tablets, mobile phones) and non-mobile media devices (e.g. television, PC). Some media devices might be more likely to be used in a family context (e.g. television), while others might be used mainly on an individual level (e.g. tablet or mobile phone) (Sonck et al., 2013).

Additionally, most previous research focuses on either young children or teenagers (Livingstone & Helsper, 2008; Nathanson, 2001; Sonck et al., 2013; Valkenburg et al., 1999). The current study compares parents with young children and parents with teenagers, as media use and advertising exposure differs between children and teenagers and, consequently, parental mediation may also be different. Parental mediation may also be related to demographic characteristics of the parent (Nikken & Jansz, 2006; Van der Voort, Nikken, & Van Lil, 1992). Previous research has shown that mothers are more likely to implement parental mediation strategies than fathers (Sonck et al., 2013; Valkenburg et al., 1999; Van der Voort et al., 1992). Also the educational level affects the level and type of parental mediation strategies used (Roe, 2000; Sonck et al., 2013; Van der Voort et al., 1992).

The focus of the current paper is twofold. On the one hand parental concerns regarding contemporary advertising formats is studied with a focus on children's understanding of these

advertising formats (Rozendaal, Buijzen, et al., 2011), the ethical appropriateness of using these formats to target youngsters (Geraci, 2004; Grimm, 2004; Nairn & Dew, 2007), and the appropriate age at which children should be informed about the commercial intention of these formats (Nairn & Dew, 2007). On the other hand, parents' use of different parental mediation strategies with regard to advertising is investigated for different media devices. Moderating factors such as children's age and parents' educational level and gender are studied. This leads to the following research questions:

RQ 1: According to parents (legal guardians), from which age onwards

- (a) do youngsters understand contemporary advertising formats,
- (b) is the use of contemporary advertising formats towards youngsters ethically acceptable
- (c) should youngsters be made aware of the commercial intent of contemporary advertising formats?

RQ 2: How many parental mediation strategies are used by parents (legal guardians) on television, personal computer or laptop used for leisure time, mobile phone and tablet?

RQ 3: For how many media devices do parents (legal guardians) use mediation strategies?

RQ 4: Is the perception of advertising's appropriateness and the use of parental mediation strategies influenced by

- (a) the age of the child(ren),
- (b) the gender of the parent (legal guardian)
- (c) the educational level of the parent (legal guardian)?

The term '*parent(s)*' is used throughout this paper referring to both parents and legal guardians.

Our study offers several contributions. First, the majority of previous research on parental concerns and mediation has focused on one traditional medium or online media in general. We study concerns and parental mediation strategies with respect to contemporary online

advertising formats and with regard to different media devices simultaneously. Second, we extend the study of parental mediation strategies by using a more fine-grained mediation categorisation framework. Third, we explicitly compare the concerns and mediation strategies between parents of young children and parents of teenagers. Finally, we also explicitly compare the concerns and mediation strategies of mothers and fathers and of more and less educated parents. The study can inform the advertising industry, the educational system and public policy about how parents can be supported in developing and monitoring their children's advertising literacy.

2 Literature review

2.1 Parents' concerns about the appropriateness of contemporary advertising formats targeted at youngsters

Advertising literacy or persuasion knowledge develops during childhood, together with cognitive development and advertising experience (Friestad & Wright, 1994; Friestad & Wright, 2005; Wright et al., 2005). The more a person encounters advertising, he or she will begin to develop advertising knowledge, knowledge about advertising techniques and the underlying commercial and persuasive intentions (Wright et al., 2005). Cognitive development is related to age (John, 1999; Roedder, 1981). During consumer socialisation in childhood, three cognitive stages are distinguished, each referring to a different age group: the perceptual stage (3-7 years), the analytical stage (7-11 years) and the reflective stage (11-16 years) (John, 1999). In the *perceptual* stage children are able to distinguish advertising from other media content by means of perceptual cues (e.g. they notice that the traditional 30-second spot on television has a shorter duration than the television programme). In the *analytical* stage, children combine different sources of information, instead of relying on perceptual cues only. Children belonging to the analytical stage are able to understand that the goal of advertising is to sell products. Only from the *reflective* stage onwards children 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).

The fore-mentioned framework was developed in the context of traditional advertising. However, contemporary advertising formats are often integrated in media content and/or interactive in nature. Consequently, distinguishing advertising from content has become more

difficult as the commercial message is hidden in media content and interactive content or advertising may divert youngsters' attention from its persuasive nature (Owen et al., 2014; Owen et al., 2013; Panic et al., 2013). Indeed, research has shown that children and teenagers are challenged even more by contemporary advertising to identify and understand the persuasive nature of these messages (Owen et al., 2014; Owen et al., 2013; Panic et al., 2013; Rozendaal, Lapierre, et al., 2011; Verhellen et al., 2014). One can thus assume that the use of these contemporary advertising formats raise concerns with parents about their appropriateness and fairness, at which age children understand different advertising tactics (Rozendaal, Buijzen, et al., 2011), and when youngsters should be exposed to them and informed about them in order to develop advertising literacy (Nairn & Dew, 2007). If youngsters do not fully comprehend the persuasive and commercial intent behind advertising they will not activate a cognitive defence against this message and are at risk of being unconsciously persuaded and manipulated (Nairn & Dew, 2007). Contemporary advertising formats make this even more of a challenge, as in order to cope with a persuasive tactic one should first be able to recognise the persuasive message as such (Friestad & Wright, 1994). Therefore, the first questions we try to answer is from which age onwards do parents believe that youngsters understand contemporary advertising formats, from which age it is appropriate to expose them to these formats, and at which age children should be informed about them to develop advertising literacy (RQ1).

2.2 Parental mediation

According to parental media theory, parents use different strategies to mediate media use and advertising effects on children (Clark, 2011). Parental mediation is defined as '*any strategy parents use to control, supervise or interpret (media) content for children and adolescents*' (Warren, 2001 p. 212). Traditionally, three styles of parental mediation are distinguished, namely; restrictive mediation, active (or so called instructive) mediation and co-viewing (Clark, 2011; Nathanson, 2001; Nikken & Jansz, 2006; Valkenburg et al., 1999). *Restrictive* mediation is setting rules, restrictions or regulations on children's media use (Nathanson, 2001; Nikken & Jansz, 2006; Valkenburg et al., 1999). Parents can for example set a rule that their children's use of a tablet is restricted to one hour per day or is only allowed at specific days or moments during the week, or reduce youngsters' advertising exposure (Buijzen & Valkenburg, 2005). *Active* mediation refers to parents' critical discussion of media or advertising content with their children (Valkenburg et al., 1999). *Co-viewing* is watching media or advertising content together without actively discussing it (Valkenburg et al., 1999). These different mediation

strategies are not exclusive and parents can use different parental mediation strategies simultaneously (Newman & Oates, 2014). Due to the increasingly integrated and interactive nature of contemporary advertising formats, youngsters' exposure to media content on different media devices often implies exposure to advertising messages as well. The three parental mediation strategies can thus apply to different media devices, and they also imply mediation of advertising viewing on these media devices.

Studies on parental mediation of *media use* are inconclusive about the effectiveness of the three different parental mediation strategies (Livingstone & Helsper, 2008). Restrictive mediation can be effective in reducing children's exposure to media content. Active mediation is considered as most effective regarding media literacy (Mendoza, 2009). Actively discussing media content can result in a deep understanding of the content itself and trigger a critical attitude (Livingstone & Helsper, 2008; Nathanson, 2001). Parents may use co-viewing to give their children experience with different media. On the other hand, co-viewing might result in passive viewing or passive exposure only. Research on parental *advertising* mediation shows that active mediation is more effective in countering advertising effects than restrictive mediation (Bijmolt et al., 1998; Buijzen & Valkenburg, 2003) because the former has an educational component (Mendoza, 2009). (Vanwesenbeeck et al., 2016) found that restrictive mediation is more effective in enhancing understanding of *selling* intent, but does not result in a better understanding of *persuasive* intent. So far, research on parental advertising mediation did not take co-viewing into account (Bijmolt et al., 1998; Buijzen & Valkenburg, 2005; Vanwesenbeeck et al., 2016), except for the study of Nelson et al. (2017) with preschool children. In the current study, we also include this mediation strategy.

As today's media environment is characterised by a wide variety of media devices used for media consumption, parental mediation and advertising exposures has changed along (Nelson et al., 2017). Households possess mobile media devices (laptops, tablets and smartphones) that allow online media content consumption, and non-mobile media devices that only facilitate offline media consumption (e.g. television, except for smart TVs). Mobile media devices are characterised by a smaller (screen) size. As a consequence, they are used more on an individual basis than on a family level (Sonck et al., 2013). This poses challenges for the implementation of parental mediation strategies such as active mediation and co-viewing, as it become difficult or even impossible to watch, look and explain the content shown on these small and individually used screens (Sonck et al., 2013). Online media are more versatile as different types of content are available; videos, games, social networking sites, websites and shops, whereas, for instance,

offline television has a focus on news and entertainment without the opportunity to interact with friends who are not present in the same physical environment (Sonck et al., 2013). Mediating online content is thus a way more complex task in which parents may lose control in monitoring all these different components of the online world. However, one can argue that given the complexity of online content, parents are likely to have more concerns towards online media compared to traditional media. These different media devices are indeed the key towards a world full of advertising as this is inherently present on all these media devices. It is thus relevant to study parental mediation on both mobile and non-mobile media devices simultaneously in one study, as this provides a more valid reflection of parents' mediation tasks in households' multimedia equipped environment.

Additionally, the starting point of parental mediation are parents' concerns about negative effects, risks and dangers from media and advertising (Nikken & Jansz, 2006; Sonck et al., 2013; Warren, 2001). Regarding online media and online advertising, parents are mainly concerned about privacy (Spiteri Cornish, 2014). Also Newman and Oates' (2014) study shows that parents are hardly concerned about internet advertising and barely aware of the effects these online advertising can have on individuals. They appear to be more concerned about marketing communication forms they are familiar with, such as television advertising and in-store promotions (Newman & Oates, 2014). Therefore, it can be expected that parental mediation is different across media devices.

The second and third research question we try to answer is how many and which parental mediation strategies are used (RQ2), and for how many and which media devices (television, computer, tablet and mobile phone) (RQ3).

2.3 Factors influencing parental concerns and mediation

Literature on parental mediation identified several variables as significant predictors of parental mediation strategies used (Lee, 2012; Valkenburg et al., 1999), such as parents' advertising literacy (Spiteri Cornish, 2014), parental perceptions of media effects (Nathanson, 2001; Shin & Huh, 2011; Valkenburg et al., 1999), age of the child (Livingstone & Helsper, 2008; Nathanson, 2001; Nikken & Jansz, 2014; Sonck et al., 2013), gender of the child (Livingstone & Helsper, 2008), socio-economic status (SES) (Livingstone & Helsper, 2008), educational level of the parent (Connell, Lauricella, & Wartella, 2015; Sonck et al., 2013; Van der Voort et al., 1992) and gender of the parent (Connell et al., 2015; Sonck et al., 2013; Van der Voort et

al., 1992). The current study focuses on the effect of the age of the child, and the gender and educational level of the parent (RQ 4).

2.3.1 Age of the child

As children's advertising knowledge and persuasion knowledge develops through different stages during childhood, one can assume that younger children (in the perceptual and analytical stage) are more vulnerable for advertising effects compared to older teenagers (in the reflective stage) whose cognitive skills are more matured. As contemporary advertising is embedded in other media content or creates an interaction with products and brands, recognising and identifying advertising becomes even more of a challenge (Owen et al., 2014; Owen et al., 2013; Panic et al., 2013). This raises concerns about potential misleading or unconscious persuasion, the age at which children are able to recognise and understand these embedded advertising formats (Rozendaal, Buijzen, et al., 2011), the ethical appropriateness of using these advertising formats at minors (Geraci, 2004; Grimm, 2004), and when children and teenagers should be informed and educated about the commercial intent behind these messages (Nairn & Dew, 2007). Previous research found that the number of parental mediation strategies used appears to be related to the age of the child, with more parental media strategies being used towards younger children compared to older children, also for online media (Clark, 2011; Nathanson, 2001; Valkenburg et al., 1999), (Lee, 2012; Livingstone & Helsper, 2008; Shin & Huh, 2011; Sonck et al., 2013). This can be explained by the fact that parents become less concerned over potential harmful media effects when their children grow older (Opgenhaffen et al., 2012). Parents of so called 'tweens' (8-12 years) talk more about media with their children compared to parents of teenagers (13-18 years) (Common Sense Media, 2017b). Therefore we expect that parents of young children (6-12 year) are more concerned about contemporary advertising formats and implement more parental mediation compared to parents with teenagers (13-18 years).

2.3.2 Educational level of the parent

Parental mediation is also related to the educational level of the parent (Roe, 2000; Sonck et al., 2013). Highly educated parents are more likely to be aware of the risks, effects and benefits of different media (Notten & Kraaykamp, 2009), and as a consequence might have more concerns about the negative effects and risks and would apply more parental mediation strategies. Previous research indeed shows that parents with a higher educational level apply more parental mediation compared to parents with a lower educational background (Clark, 2011; Common

Sense Media, 2017a, 2017b; Valkenburg et al., 1999; Van der Voort et al., 1992). Children from parents with a lower educational level spend more time with media compared to children from parents with a higher educational background (Common Sense Media, 2017a, 2017b). Parents with a lower educational background apply more restrictive mediation on their children's online activities and videogame playing (Nikken & Jansz, 2006; Sonck et al., 2013). Not every adult or parent is aware of contemporary advertising tactics and the risks and concerns involved (Nelson et al., 2017), and this may be more the case for lower educated parents than for highly educated ones. A lack of advertising knowledge might hamper parent's active discussion with their children about how advertising works on different media (Nelson et al., 2017).

We thus expect that higher educated parents express more concerns about contemporary advertising formats and implement more and different parental mediation strategies.

2.3.3 Gender of the parent

Mothers are more likely to use parental mediation strategies than fathers both for traditional and non-traditional media (Clark, 2011; Nathanson, 2001; Nikken & Jansz, 2014; Sonck et al., 2013; Valkenburg et al., 1999; Van der Voort et al., 1992; Warren, 2001), because mothers appear to be more concerned about media and advertising effects and might still see themselves as the primary care-givers (Valkenburg et al., 1999). We thus expect a greater concern and more intensive mediation from mothers than from fathers.

3 Method

3.1 Procedure

We studied parents' concerns regarding contemporary advertising formats aimed at youngsters (6-18 years old) and parental mediation strategies by means of an online survey (see appendix 8.2). To reach parents we used two sources. First, the full database of a marketing agency working with children and teenagers and their parents was emailed. They were invited to complete the survey that was provided in a link. Only parents who either had only children between 6 and 12 years or only teenagers between 13 and 18 years old were selected by means of a screening question. In addition, the same survey was randomly emailed by a professional market research agency, using the same procedure. At the beginning of the questionnaire the respondents were informed about the topic of the survey, were reminded that the questionnaire was about their own personal opinion, that there were no right or wrong answers and that their

answers would be treated anonymously. Parents had to indicate whether their children were either between 6 and 12 years old or between 13 and 18 years old. Parents' concerns regarding contemporary advertising formats were investigated by means of vignettes representing nine different contemporary advertising formats (see further). This was followed by questions concerning the use of different parental mediation strategies for different media devices (see further). The survey ended with questions about the age of the respondent, gender and educational level. The age of the respondent was not used in further analysis because of the strong correlation between the age of the parent and the children.

The first source resulted in 114 parents who completed the survey. The second source was completed by 226 parents. In total 340 parents were thus reached. The sample consists of 200 parents who only had children between 6 and 12 years and 140 parents who only had teenagers between 13 and 18 years old. The sample had the following demographic characteristics: $M_{\text{age}} = 42.54$ year; $SD = 6.77$; minimum age = 29 years; maximum age = 66 years. The majority of the sample were mothers (68.5%). The percentage of mothers in our sample is similar to the division between mothers and fathers in other studies on parental mediation (Buijzen & Valkenburg, 2005; Dens et al., 2007; Nathanson, 2001); 42.1% of the parents was less educated (high school or lower) and 57.9% of the parents were educated beyond high school (professional bachelor, academic bachelor and academic master degree).

3.2 Measures

3.2.1 Vignettes

Nine different vignettes were presented describing contemporary integrated and/or interactive advertising formats used to target youngsters (appendix 8.1). Vignettes are descriptions of concrete situations presented to respondents to reflect upon or give their opinion about. An advantage of vignettes is that they provide an identical stimulus on which different respondents react (Mortelmans, 2007). The sequence in which the different vignettes appeared was randomised to avoid order effects. The nine vignettes described advertising formats without mentioning the specific name or advertising format they refer to. The following formats were captured in the vignettes of the study: product placement on television, in-game advertising, advergames, applications, video advertising, online behavioural advertising, search engine marketing, location based services and merchandising. Most of these advertising formats are prominent examples of contemporary advertising formats. They were most often mentioned in

exploratory interviews with advertisers and advertising agencies as formats that are used towards youngsters. Merchandising is the only traditional advertising format and was chosen because it was often mentioned as a very prominent technique when targeting children.

By means of a slider ranging from 6 to 18 years old, for each vignette the respondents answered two questions:

- 1) from which age onwards are youngsters capable of understanding the persuasive nature of the advertising format described in the vignette?
- 2) from which age onwards is the advertising format ethically acceptable to use towards youngsters?

If respondents held the opinion that minors were not capable of understanding the advertising format, or that the use of an advertising format was not ethically acceptable towards minors, they could indicate this answer option and they did not have to indicate an age on the slider. Only when a respondent indicated an age to the second question, they had to answer a third question:

- 3) from which age onwards would minors need to be notified about the commercial intent of the advertising format described in the vignette?

These questions were based on the Harris Interactive study regarding the ethics of advertising and marketing aimed at children and advertisers' perceptions regarding these advertising formats (Geraci, 2004; Grimm, 2004). For each vignette question an overall mean score across the nine different advertising formats was calculated.

3.2.2 Parental mediation strategies

The next section of the questionnaire addressed parental mediation strategies (appendix 8.2). These questions were based on the three traditional strategies distinguished in the literature: restrictive mediation, active mediation and co-viewing (Nathanson, 2001; Nikken & Jansz, 2006; Valkenburg et al., 1999). Parents were asked for which media devices (television, computer use during leisure time, mobile phone and tablet) they used the following parental mediation strategies: *restrictions*, discussion or explanation of *advertising in general*, discussion or explanation of *advertising techniques used by advertisers*, discussion or explanation of *advertising's intention*, *co-viewing/watching* media content together. There were

thus three questions on active parental mediation and one question for restrictive mediation and for co-viewing. For each parental mediation question, parents had to indicate on which media device they used this strategy (multiple answer option). For each question parents could also indicate that they did not use the strategy for a particular media device. Each respondent received these questions of the survey in the same order.

On the basis of the answers to the mediation questions, two variables were calculated. For each of the four media devices a 6-point scale ranging from 0-5 was computed based on the dummy variables (coded 0 or 1) of each parental mediation question. This variable thus refers to the number of parental mediation strategies used for each of the different media devices. Additionally, for each parental mediation question a 5-point scale ranging from 0-4 was computed based on the dummy variables (coded 0 or 1) for each media device. This variable thus measures the number of media devices on which a particular parental mediation strategy is used.

The demographics gender and educational level were asked at the end of the survey. Educational level originally consisted of five possible answer options (lower secondary education, higher secondary education, professional bachelor, academic bachelor and academic master). This variable was recoded into a dummy variable representing lower education (high school or lower) and higher education (beyond high school).

3.2.3 *Analyses*

To investigate the effect of the age of the child, the gender of the parent and the educational level of the parent on parental perceptions regarding the average age at which children are able to understand advertising formats, the average age at which it is ethically appropriate to use different advertising formats towards minors, and the average age at which children should be informed about the persuasive intent behind the advertising formats, three 2 (age of the child) X 2 (gender parent) X 2 (educational level of the parent) ANOVAs were performed, including all two-way interaction effects between the three independents. The average overall mean score for each of the three vignette questions was the dependent variable.

To investigate the difference between the number of parental mediation strategies for each media device and the difference between the number of media devices for each parental mediation strategy for each age group, two repeated measures ANOVAs were performed for each age group separately (four in total). The data were not analysed using a mixed method

ANOVA with both within (number of parental mediating strategies per media device or number of media device per parental mediation strategy) and between (age group of the children) measures, as the assumption for homogenous error variances across the groups was violated (Box test of equality of covariance matrices and Levene's test of equality of error variance).

To investigate the effects of the age of the child, the gender of the parent and the parent's educational level (independent variables), including all two-way interaction effects between the three independents, on the number of parental mediation strategies used for each media device (dependent variable), four 2 (age of the child) X 2 (gender parent) X 2 (educational level of the parent) ANOVAs were performed, one for each media device (TV, personal computer, mobile phone and tablet).

Five 2 (age of the child) X 2 (gender parent) X 2 (educational level of the parent) (independent variables) ANOVAs were performed to investigate on how many media devices each of the five parental mediation strategies (dependent variables) are used. Also in these analyses all two-way interactions between the three independents were included.

4 Results

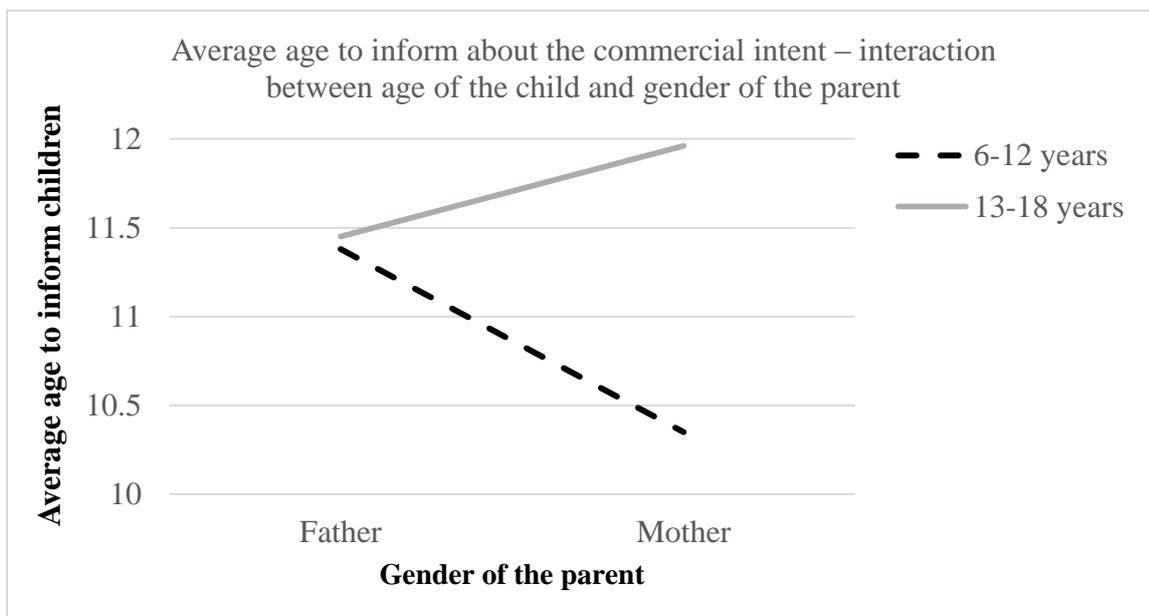
4.1 Concerns about advertising

The average age at which parents perceive children as able to understand advertising formats is 13.01 years (SD = 2.29) (N 'question not applicable' = 8). The average age at which parents consider the use of integrated and interactive advertising formats as ethically appropriate is 13.66 years (SD = 2.43) (N 'question not applicable' = 23). Parents would inform their children about the persuasive intent behind advertising on average from the age of 10 years onwards (N 'question not applicable' = 33).

The ANOVA models with the dependent variables 'from which age onwards children are capable of understanding the advertising formats tested' and 'the average age at which it is ethically appropriate to use these advertising formats' are not significant ($p = 0.464$ and $p = 0.271$, respectively). Consequently, neither the age of the child, nor the gender or the educational level of the parent has an influence on parental perceptions regarding the average age at which children are able to understand contemporary advertising formats or the average age at which it is ethically appropriate to use these advertising formats to children and teenagers.

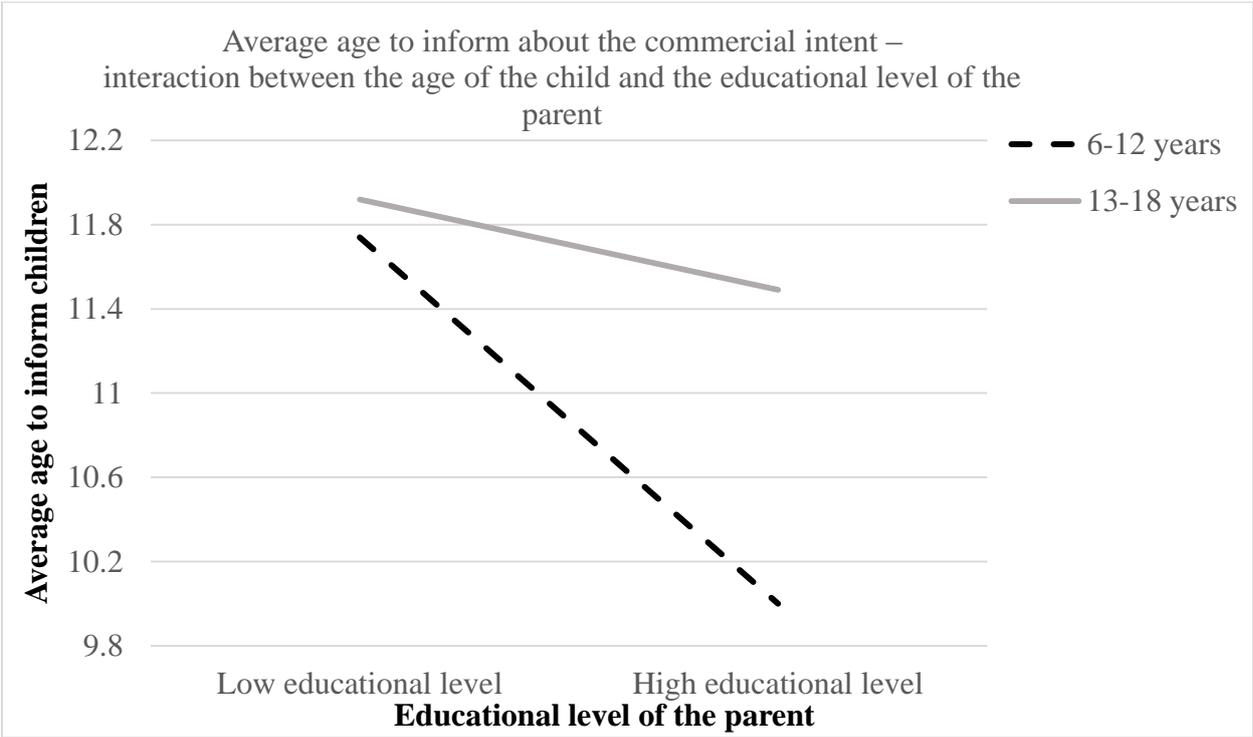
There is a significant main effect of the age of the child ($p = 0.027$) and the educational level of the parent ($p = 0.004$) (p -value model < 0.001) on parent's perception concerning the average age at which children should be informed about the commercial intent behind the advertising formats. Parents of children between 6 and 12 years would inform children one year earlier ($M_{\text{children 6-12}} = 10.87$ year) about the commercial intent behind advertising formats than parents with teenagers between 13 and 18 year ($M_{\text{teenagers 13-18}} = 11.71$ year). Parents with a higher educational level would inform children one year earlier ($M_{\text{high education}} = 10.74$) than parents with a lower educational level ($M_{\text{low education}} = 11.83$). There is a significant interaction effect between the age of the child and the gender of the parent ($p = 0.042$). Simple effects analysis shows that mothers with younger children would inform them from an earlier age onwards ($M_{\text{children 6-12}} = 10.35$ year) than mothers with teenagers ($M_{\text{teenagers 13-18}} = 11.96$ year) ($p = 0.001$), while this difference is not significant for fathers ($p = 0.911$). Stated differently, mothers of young children would inform them one year earlier ($M_{\text{mother}} = 10.35$) than fathers of young children ($M_{\text{fathers}} = 11.38$) ($p = 0.059$), whereas the differences between mothers and fathers of teenagers is not significant ($p = 0.313$) (see Figure 5.1).

Figure 5.1: Average age to inform about the commercial intent – interaction between age of the child and gender of the parent



There is also a marginally significant interaction effect between the age of the child and the educational level of the parent ($p = 0.076$). Simple effects analysis shows that parents with a high educational level and young children perceive that children should be informed from an earlier age onwards ($M_{\text{children } 6-12} = 10.0$ year) than highly educated parents with teenagers ($M_{\text{teenagers } 13-18} = 11.49$ year) ($p = 0.004$). For less educated parents, this difference is not significant ($p = 0.772$). Stated differently, high educated parents of young children would inform them earlier ($M_{\text{high education}} = 10.0$ year) than less educated parents of young children ($M_{\text{low education}} = 11.74$ year) ($p = 0.001$), whereas the differences between less and high educated parents of teenagers is not significant ($p = 0.396$) (Figure 5.2).

Figure 5.2: Average age to inform about the commercial intent – interaction between the age of the child and the educational level of the parent



4.2 Number of parental mediation strategies per media device

Repeated measures ANOVAs were performed to investigate the number of parental mediation strategies used per media device for each age group. For parents with young children, overall, there is a significant difference ($p < 0.001$) between the number of parental mediation strategies used for different media devices. Parents use on average three to four out of five parental mediation strategies when mediating television use, two to three strategies for PC and tablet, and slightly over one strategy for mobile phones. These differences are statistically significant, except for the difference between personal computer and tablet (Table 5.1).

Table 5.1: Number of parental mediation strategies used per media device by parents of young children 6-12

Media device	Mean
TV	3.495
PC	2.530
Mobile phone	1.220
Tablet	2.510

Media device I	Media device J	Mean diff (I-J)	Std. Error	Sig.
TV	PC	.965	.116	<.001
	Mobile phone	2.275	.136	<.001
	Tablet	.985	.118	<.001
PC	Mobile phone	1.310	.127	<.001
	Tablet	.020	.124	1.000
Mobile phone	Tablet	-1.290	.123	<.001

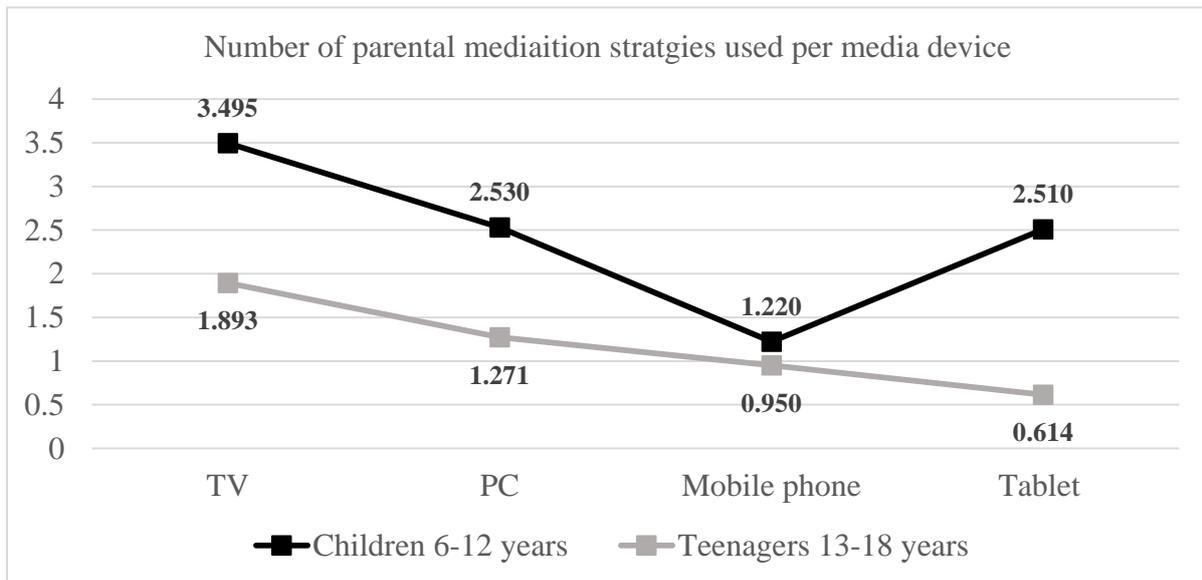
Parents of teenagers on average use fewer mediation strategies than parents of young children (Table 5.2). Television is the media device for which most parental mediation strategies are used (on average almost two), followed by personal computer (slightly more than one), mobile phone (almost one) and tablet. All differences are statistically significant. Figure 5.3 summarises the number of parental mediation strategies per media device, for both parents of young children and of teenagers.

Table 5.2: Number of parental mediation strategies used per media device to teenagers 13-18 years

Media device	Mean
TV	1.893
PC	1.271
Mobile phone	.950
Tablet	.614

Media device I	Media device J	Mean diff (I-J)	Std. Error	Sig.
TV	PC	.621	.120	<.001
	Mobile phone	.943	.149	<.001
	Tablet	1.279	.146	<.001
PC	Mobile phone	.321	.090	.003
	Tablet	.657	.107	<.001
Mobile phone	Tablet	-.336	.102	.007

Figure 5.3: Overview of the number of parental mediation strategies used per media device towards children and teenagers



4.3 Number of media devices per parental mediation strategy

By means of repeated measure ANOVAs it was investigated for how many media devices each parental mediation strategy is used per age group. Parents of young children use restrictive mediation for almost three media devices, followed by co-viewing, discussing advertising in general and advertising intent (almost two media devices). Discussing advertising techniques is least often done. There is no significant difference in the number of media devices for discussing advertising intent, co-viewing and discussing advertising in general (Table 5.3).

Table 5.3: Number of media devices on which each parental mediation strategy is implemented to young children 6-12 year

Parental mediation strategy	Mean
Restrictions	2.855
Discussing advertising in general	1.885
Discussing advertising techniques	1.325
Discussing advertising intent	1.730
Co-viewing	1.960

PM-strategy I	PM-Strategy J	Mean diff (I-J)	Std. Error	Sig.
Restrictions	Advertising in general	.970	.104	<.001
	Advertising techniques	1.530	.112	<.001
	Advertising intent	1.125	.105	<.001
	Co-viewing	.895	.104	<.001
Advertising in general	Advertising techniques	.560	.078	<.001
	Advertising intent	.155	.066	.194
	Co-viewing	-.075	.093	1.000
Advertising techniques	Advertising intent	-.405	.073	<.001
	Co-viewing	-.635	.107	<.001
Co-viewing	Advertising intent	.230	.099	.211

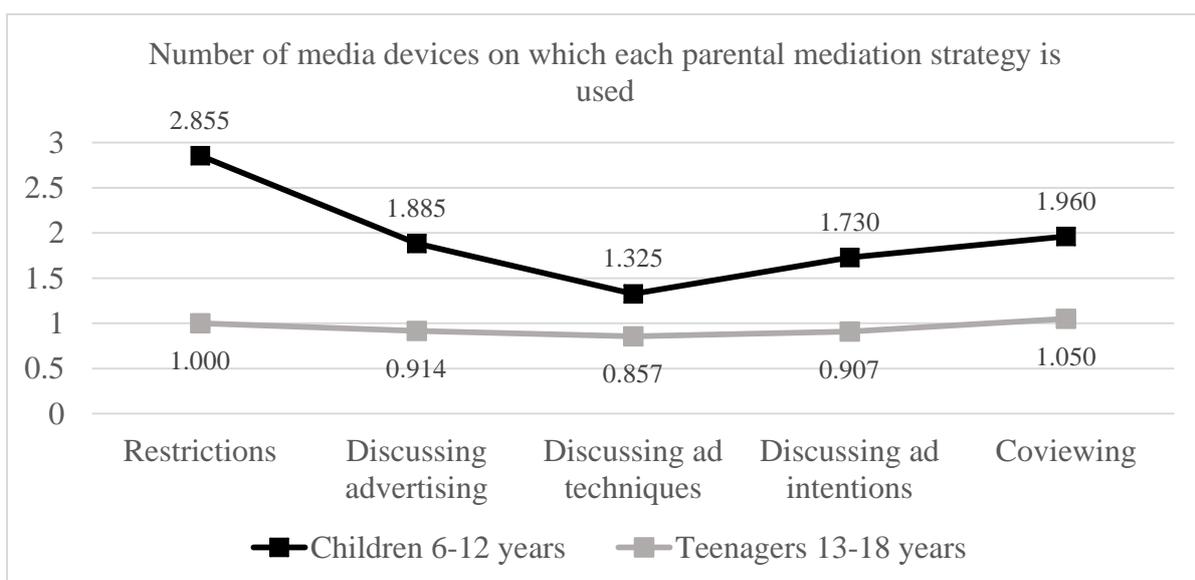
The number of media devices for which parental mediation is applied is substantially smaller for parents with teenagers than for parents with young children, and there is no difference in the number of media devices on which different parental mediation strategies towards teenagers are used (Table 5.4). Figure 5.4 gives an overview of the number of media devices on which each parental mediation strategy is implemented to both children and teenagers.

Table 5.4: Number of media devices on which each parental mediation strategy is implemented to teenagers 13-18 year

Parental mediation strategy	Mean
Restrictions	1.000
Discussing advertising in general	.914
Discussing advertising techniques	.857
Discussing advertising intent	.907
Co-viewing	1.050

PM-strategy I	PM-Strategy I	Mean diff (I-J)	Std. Error	Sig.
Restrictions	Advertising in general	.086	.131	1.000
	Advertising techniques	.143	.134	1.000
	Advertising intent	.093	.134	1.000
	Co-viewing	-.050	.126	1.000
Advertising in general	Advertising techniques	.057	.079	1.000
	Advertising intent	.007	.081	1.000
	Co-viewing	-.136	.090	1.000
Advertising techniques	Advertising intent	-.050	.054	1.000
	Co-viewing	-.193	.107	.730
Co-viewing	Advertising intent	.143	.107	1.000

Figure 5.4: Overview of the number of media devices on which each parental mediation strategy is used towards both children and teenagers



In the following analyses, both each media device and each parental mediation strategy are studied separately, and the effect of the age of the children and the gender and educational level of the parents are assessed.

4.4 Number of parental mediation styles per media device

4.4.1 Television

The (2x2x2) ANOVA analysis shows that there is a significant main effect of the age of the child ($p < 0.001$), the gender of the parent ($p = 0.024$) and the educational level of the parent ($p = 0.027$) on the number of parental mediation strategies used for television. Parents of young children use more parental mediation strategies ($M_{\text{children}} = 3.20$) than parents of teenagers ($M_{\text{teenagers}} = 1.92$). Mothers apply more parental mediation styles ($M_{\text{mothers}} = 2.79$) than fathers ($M_{\text{fathers}} = 2.33$). Parents with a high educational level implement more parental mediation styles ($M_{\text{high education}} = 2.80$) than less educated parents ($M_{\text{low education}} = 2.33$).

4.4.2 Personal computer (laptop)

Parents of young children use significantly more mediation strategies for computer use ($M_{\text{children}} = 2.24$) than parents of teenagers ($M_{\text{teenagers}} = 1.37$) ($p < 0.001$). Parents with a higher educational level apply more parental mediation strategies ($M_{\text{high education}} = 2.17$) than parents with a low educational level ($M_{\text{low education}} = 1.44$) ($p = 0.001$).

4.4.3 Mobile phone

The ANOVA model of the number of parental mediation styles applied to mobile phone is not significant ($p = 0.196$). Consequently, the number of parental mediation strategies for mobile phone does not depend on the age of the child, the gender of the parent or the educational level of the parent.

4.4.4 Tablet

The main effects of the age of the child ($p < 0.001$) and the educational level of the parent ($p < 0.001$) are significant. Parents of young children apply more mediation strategies for tablet use ($M_{\text{children}} = 2.23$) than parents of teenagers ($M_{\text{teenagers 13-18}} = 0.71$). Higher educated parents use more parental mediation strategies ($M_{\text{high education}} = 1.85$) than less educated parents ($M_{\text{low education}} = 1.09$).

No significant interaction between the age of the child, the gender of the parent or the education of the parent were found for any medium type.

4.5 Number of media devices on which each parental mediation style is applied

4.5.1 Restrictions

Restrictions are used on more media devices by parents of young children ($M_{\text{children}} = 2.64$) than by parents of teenagers ($M_{\text{teenagers}} = 1.09$) ($p < 0.001$). Parents with a higher education implement restrictive mediation on more media ($M_{\text{high education}} = 2.20$) than parents with a low education level ($M_{\text{low education}} = 1.53$) ($p < 0.001$).

4.5.2 Discussing advertising in general

For the active parental mediation style 'discussing advertising in general', parents of young children discuss advertising in general on different media devices more often ($M_{\text{children}} = 1.72$) than parents of teenagers ($M_{\text{teenagers}} = 0.99$) ($p < 0.001$). Parents with a higher educational level apply this parental mediation style on more media devices ($M_{\text{high education}} = 1.61$) than parents with a low educational level ($M_{\text{low education}} = 1.10$) ($p = 0.003$).

4.5.3 Discussing advertising techniques

Parents with a higher educational level discuss advertising techniques on more media devices ($M_{\text{high education}} = 1.27$) than parents with a lower educational level ($M_{\text{low education}} = 0.78$) ($p = 0.005$).

4.5.4 Discussing advertising intent

Discussing advertising intent is applied on more media devices by parents of young children ($M_{\text{children}} = 1.74$) than by parents of teenagers ($M_{\text{teenagers}} = 0.97$) ($p = 0.003$). Mothers use this type of parental mediation on more media devices ($M_{\text{mother}} = 1.39$) than fathers ($M_{\text{father}} = 1.05$) ($p = 0.038$). Highly educated parents use this type of parental mediation on more media devices ($M_{\text{high education}} = 1.45$) than parents with low education ($M_{\text{low education}} = 0.99$) ($p = 0.006$).

4.5.5 Co-viewing

Parents of young children watch more different media together with their children ($M_{\text{children}} = 1.80$) than parents of teenagers ($M_{\text{teenagers}} = 1.08$) ($p < 0.001$).

For none of the parental mediation strategies significant interactions between the age of the child, the gender of the parent and the educational level were found.

5 Conclusion and discussion

The average age at which parents consider children able to understand the commercial intent of integrated and interactive advertising formats and the average age at which they consider the use of these advertising formats ethically appropriate is approximately 13 years. Results show that parents consider transparency about the persuasive intent very important, as they would inform children at the age of 10 about the underlying persuasive intent, while they consider children capable of understanding the intent of the advertising formats only from the age of 13 years onwards. Parents would thus inform their children even before they are capable of fully understanding how the advertising formats work. Remarkably, the perceptions of the parents in our study are very similar to advertisers' perceptions (Daems, De Pelsmacker, et al., 2017). Advertisers consider children able to understand advertising formats, and find it ethically appropriate to use these advertising formats from the age of 12-13 years onwards. Moreover, advertisers would inform children about the commercial intent behind advertising from the age of 9-10 years onwards. Parents' and advertisers' perceptions are thus in line with consumer socialisation theory based on traditional media where children from the reflective stage onwards (12-16 years) are considered to have developed advertising and persuasion knowledge that reaches the same level as those of adults (John, 1999).

More mediation strategies are used on more media devices by parents of young children than by parents of teenagers. Parental mediation strategies towards young children are used in particular towards television (three to four styles are used) and less towards tablets and mobile phones (two or three styles). This is in line with previous research indicating that parents are particularly concerned about advertising in media they are familiar with, such as television, and especially to monitor young children (Newman & Oates, 2014; Spiteri Cornish, 2014). Parents have a less urgent need to mediate teenagers' media use. Here again television is the most mediated media device, followed by computer use. Teenagers' use of tablets is hardly mediated by parents. Parents mediate more often young children's tablet use, compared to mobile phone, while with teenagers they mediate more on mobile phones than on tablets. This corresponds to youngsters' different use of media devices. Teenagers use tablets less frequently and intensively compared to a mobile phone, while with younger children it is the other way around

(Apestaartjaren, 2016; Common Sense Media, 2017a, 2017b; Ofcom, 2017). The more mobile a device, the less parental mediation seems to be applied. The reason might be that, due to the smaller (screen) size of mobile devices and the fact that mobile phones are often used in a more private context, resulting in individualized media consumption on these devices, it becomes more difficult to mediate the content that children encounter on them (Sonck et al., 2013). Furthermore, even if these smaller mobile devices are used in a room shared by different household members, the position of the device and the way a person holds it implies that it is harder to interrupt or intervene in the use of the device. Additionally, parents might be in favor of children's possession and use of a mobile phone as it may function as a device that make parents feel secure because they feel that they can get in touch with their child at every possible moment of the day. Parents might thus require that their children use this device on a personal basis.

All mediation strategies are used on more media devices (TV, PC and tablets) by parents of young children than by parents of teenagers. Restrictive mediation appears to be the most often used strategy by parents of young children, followed by co-viewing and discussing advertising. The least used parental mediation strategy to young children is discussing advertising techniques. The limited use of this strategy could be expected, as it is relatively easy for a parent to set rules about media use of young children (restrictive mediation), while discussing, explaining and educating children about specific advertising tactics used is less simple as it requires more advertising knowledge and effort from parents (Nelson et al., 2017). As not all parents are familiar with advertising and advertising tactics, they might experience difficulties in explaining how a particular advertising strategy works (Nelson et al., 2017). Therefore they might be less likely to actively discuss this with their children. There is no difference in the type of parental mediation used for teenagers.

No differences were found related to the age of the children, the gender of the parent and parent's educational level on parental perceptions concerning the average age at which children are able to understand contemporary advertising formats and the average age at which the use of such formats is considered ethically appropriate. However, the age of the children and the parent's gender and educational level do have an effect on parents' perceptions about the average age at which it is necessary to inform children about the commercial purpose behind these advertising formats. Mothers of young children would inform them earlier than mothers of teenagers. This result is consistent with previous research indicating that parents realize that younger children are still developing cognitive skills and thus need help in recognising and

comprehending the underlying persuasive and commercial intent of advertising (Lee, 2012; Opgenhaffen et al., 2012). Compared to fathers, mothers of young children would inform them earlier on. This is in line with research that shows that mothers are more concerned with media and advertising effects than fathers (Clark, 2011; Nathanson, 2001; Nikken & Jansz, 2014; Sonck et al., 2013). Apparently, this concern is applied with respect to their young children, and not to their teenagers. Parents with a higher education would inform their young children earlier than their teenagers, which is not the case for less educated parents. This confirms previous research that shows that high educated parents are more concerned with media and advertising effects compared to less educated parents (Valkenburg et al., 1999; Van der Voort et al., 1992). The perceived necessity to inform from an earlier age onwards holds especially for parents with young children.

In line with previous research, the gender of the parent has an effect on parental mediation. Mothers use more parental mediation styles for television than fathers, and mothers discuss and explain the intention of advertising on more media compared to fathers (Nathanson, 2001; Nikken & Jansz, 2014; Sonck et al., 2013). Parents' educational level has an effect on parental mediation of children's media use and advertising exposure as well. In line with Valkenburg et al. (1999), parents with a high educational level appear to implement all investigated parental mediation strategies on more media and they implement all investigated parental mediation strategies on more media compared to less educated parents. Well-educated parents might be more aware of potential media and advertising risks and benefits compared to less educated ones. Research has also shown that parents with a higher educational level spend more time on activities that stimulate children's cognitive development, such as implementing parental mediation strategies (Notten & Kraaykamp, 2009). All in all, besides the age of the children, the educational level of the parent seems to be the most influential factor for parental mediation in that more highly educated parents appear to apply more mediation strategies for more media devices than lower educated ones. The former are also inclined to inform their young children at an earlier age than the latter. The effect of gender is much more limited: mothers would inform their young children at an earlier age than fathers, they mediate television viewing more closely, and they are inclined to explain advertising intent more often.

6 Implications

Developing advertising literacy in children and teenagers is thus a joint responsibility of public policy, the advertising industry, the educational system and parents. The perceived average age for children to be able to understand advertising is 13 years old. The advertising and media industry should take their responsibility to refrain from using advertising, and especially integrated and interactive formats, towards younger children, and public policy could do more efforts to impose this principle. There is a general agreement that children should be informed about advertising techniques from the age of 10 years onwards. This is a responsibility for both the educational system and parents. Primary schools should be incentivized to develop educational materials on advertising literacy and to explicitly use them in the classroom.

Parents should be assisted in raising the advertising literacy in young children. The latter is a big challenge. Familiarity and trust in their own abilities might be an issue for parents in their educational effort towards their children. Our study indicates that parents do not often discuss advertising techniques with their children. Moreover, parental mediation is far more often applied to media devices that parents are familiar with, such as television. A reason might be that parents do not consider themselves as experts in advertising and thus feel less comfortable to explain the advertising techniques used (Nelson et al., 2017). This is particularly the case for mobile devices. Parents should be much better informed about contemporary advertising techniques in order for them to feel more comfortable and experienced to effectively mediate their children's media use and exposure to online advertising. As parents are the most crucial stakeholders guiding especially young children's media and advertising exposure, it is extremely important that parents themselves are educated about media devices and advertising effects. As integrated and interactive advertising formats differ from traditional advertising, educating parents about the power and the potential deceptive and implicit effectiveness of this formats is a necessity. Raising the advertising literacy of parents may be done by means of public policy campaigns, efforts by the advertising industry or media, or by organizing workshops, especially for less well-educated parents. Mothers use more parental mediation than fathers and this might have implications for single-parent families, as parental mediation might differ between single-parent families with a mother compared to single-parent households with a father. Single-person (especially father) households may therefore warrant specific attention.

Parents are not the only stakeholder group for which a reinforcement of advertising literacy is needed. Also teachers and policy makers should be educated about how contemporary

advertising formats work and why these advertising formats are effective. The advertising and media industries should take their responsibility in this, first of all by facilitating the development of advertising literacy amongst both children and their parents and teachers, by making (online) advertising transparent and honest, and by developing awareness and educational campaigns themselves, aimed at their peers and the public at large, and by assisting schools in developing advertising literacy teaching materials.

7 Limitations and further research

A limitation of the current study is that the different advertising formats were illustrated by means of vignettes. As such, the responses only relate to the specific situations described in the vignettes whereas in real life the same advertising format can appear under different circumstances than those described in the vignettes used.

This study investigated parents' perceptions and concerns of contemporary advertising formats and their parental mediation strategies. Additional research could also investigate children's and teenagers' opinions and perceptions about advertising targeted at them, their parental mediation experiences, and their opinions and perceptions could be compared with the answers provided by parents.

As the current study used a quantitative survey, we did not explore the reasons behind parents' use of the different parental mediation strategies on different media and contemporary advertising formats. Future studies could address this by using qualitative in-depth interviews with parents.

To the best of our knowledge, no research has investigated which parental mediation strategy works best to improve children's understanding of advertising formats and the persuasive intent behind them. This is a relevant topic that can be investigated in future research. In addition, research should also investigate whether the parental mediation strategies used should differ depending on the age of the children and whether different parental mediation strategies are equally effective across different advertising formats and different media as suggested by Hudders et al. (2017).

Our study did not include parents' advertising literacy, as the measures used in our study were part of an extensive survey with a main focus on the age of the children and parental mediation strategies used on different media devices. Future research could focus on parents' level of

advertising literacy with respect to integrated and interactive advertising formats and how this affects the number and types of parental mediation strategies used to monitor and guide their children's media use, advertising exposure and advertising knowledge.

Given the increased mobility of media devices, use of mobile devices (laptops, tablets and mobile phones) becomes more and more individualized. As a result, media use becomes a more individualized habit instead of media consumption in a family context. This might imply that the three traditional parental mediation strategies investigated in the current study are not all equally applicable to or relevant for mobile devices. Future research could investigate to what extent traditional parental mediation strategies should be extended to be applicable and more relevant for mobile media use and advertising exposure on mobile media.

The sample in this study consists of parents who either have young children between 6 and 12 or teenagers between 13 and 18 years. Therefore it was not possible to investigate whether parents apply different rules to children in the household who belong to different age groups. The current study did also not take the amount of children in the household into account either. Future research could investigate whether the number and age mix of the children in a household affect parental mediation strategies used.

8 Appendices

8.1 Overview of advertising formats in vignettes

Product Placement on television	In a television series, a particular brand of soft drink is consumed often, and the logo is brought into focus. The brand has paid for the soft drink to be used in the television series.
In-game advertising (IGA)	In a popular racing game, players can choose from several existing brands of cars, and billboards advertising these car brands appear along the roadside. The car brands have paid the developers of the game to have their brands used in the racing game.
Search Engine Marketing (SEM)	Lucas would like to know more about the rules of tennis. To this end, he types 'tennis' as a search term in Google. A large number of advertisements for sports brands related to the search term appear in a sidebar next to the actual results.
Location Based Services (LBS)	Marie goes shopping with some of her friends during the school holiday. As they approach a popular chain store, she receives a text message on her mobile telephone containing a promotional code for a chain store.
Online Behavioural Advertising (OBA)	Tom is searching the internet for camping equipment for his youth movement's annual camp. When he then looks through Facebook, the News Feed contains advertisements related to camping equipment.

<p>Advergames</p>	<p>To promote the newest product in its line, a brand has developed a game that can be played on the brand's website. While playing this game, the game elements are related to the product and the brand, and players attempt to capture as many brand logos as they can.</p>
<p>Video advertising</p>	<p>A video on YouTube shows a child and a father singing the soundtrack of the latest Disney movie together. Disney paid the child's father to post the video online for the purpose of advertising. The Disney logo does not appear anywhere in the music clip, and there is no statement that the video is part of an advertising campaign.</p>
<p>Advertising in applications</p>	<p>Lori has her own tablet. Every day, she plays a music quiz that is installed as an application on her tablet. The music quiz application was a free download, with advertising appearing between the questions. A large amount of the advertising consists of ads for the latest CD from her favourite group.</p>
<p>Merchandising of popular figures in a virtual world</p>	<p>Sam has installed an application from a media company on his parents' tablet. The application is a virtual world in which he comes into contact with various media figures and in which he and his friends try to complete challenges in this virtual world successfully. A great deal of merchandising is associated with these media figures. For example, the media figures also appear in television programmes, they are present in amusement parks and they are portrayed on many products for children and teenagers.</p>

8.2 Survey Parents

Introduction:

This survey is part of an extensive research project on advertising literacy amongst children and teenagers. Advertising literacy refers to a consumer's personal knowledge concerning advertising, the persuasive intentions of advertising and the advertising techniques used.

The objective of the survey is to explore the perception of parents concerning advertising aimed at minors.

The responses will be completely anonymous, and they will be processed confidentially.

Thanks in advance for your cooperation.

Screening question:

In which of the following age category does your child(ren) belong?

- Children (6-12 years)
- Teenagers (13-18 years)

Definitions of difficult forms of advertising:

Some of the following question refer to concepts and terms related to advertising. Definitions of these concepts are given here.

Product placement:

Product placement is an advertising strategy in which brand or products are shown or mentioned in a programme context and for which the advertisers had paid to have the brand shown in the programme. An example of product placement is for instance a car brand which is often or repeatedly shown in a television series.

Online advertising:

Online advertising is advertising that appears on the Internet (e.g. YouTube), on Web pages, on social media (e.g. Facebook) or advertising that appears in mobile applications that can be installed on a smartphone or a tablet.

Information question 1:

The following section presents several situations concerning various forms of advertising aimed at minors. They are followed by several questions related to these situations.

Understanding a form of advertising:

'Understanding a form of advertising' means that a person is able to recognise the form of advertising as advertising, with the understanding that the purpose of this form of advertising is to persuade people.

Ethical aspect

In this survey, the term 'ethically acceptable' is used to refer to the 'appropriateness' or the 'moral acceptability' of directing particular forms of advertising to children or teenagers.

Question 1: (Vignettes)

Respondents had to answer 2 (or 3 see method section) questions for each vignette.

Please indicate by means of a slider (6-18 years) from which age onwards you consider children able to understand the advertising format described in the vignette.

Please indicate by means of a slider (6-18 years) from which age onwards you the usage of the advertising format described in the vignette as ethically appropriate to use towards minors

Please indicate by means of a slider (6-18 years) from which age onwards you consider children should be informed about the commercial intent behind the advertising formats described in the vignette.

- In a television series, a particular brand of soft drink is consumed often, and the logo is brought into focus. The brand has paid for the soft drink to be used in the television series.
- In a popular racing game, players can choose from several existing brands of cars, and billboards advertising these car brands appear along the roadside. The car brands have paid the developers of the game to have their brands used in the racing game.
- Lucas would like to know more about the rules of tennis. To this end, he types 'tennis' as a search term in Google. A large number of advertisements for sports brands related to the search term appear in a sidebar next to the actual results.
- Marie goes shopping with some of her friends during the school holiday. As they approach a popular chain store, she receives a text message on her mobile telephone containing a promotional code for chain store.
- Tom is searching the internet for camping equipment for his youth movement's annual camp. When he then looks through Facebook, the News Feed contains advertisements related to camping equipment.

- To promote the newest product in its line, a brand has developed a game that can be played on the brand's website. While playing this game, the game elements are related to the product and the brand, and players attempt to capture as many brand logos as they can.
- A video on YouTube shows a child and a father singing the soundtrack of the latest Disney movie together. Disney paid the child's father to post the video online for the purpose of advertising. The Disney logo does not appear anywhere in the music clip, and there is no statement that the video is part of an advertising campaign.
- Lori has her own tablet. Every day, she plays a music quiz that is installed as an application on her tablet. The music quiz application was a free download, with advertising appearing between the questions. A large amount of the advertising consists of ads for the latest CD from her favourite group.
- Sam has installed an application from a media company on his parents' tablet. The application is a virtual world in which he comes into contact with various media figures and in which he and his friends try to complete challenges in this virtual world successfully. A great deal of merchandising is associated with these media figures. For example, the media figures also appear in television programmes, they are present in amusement parks and they are portrayed on many products for children and teenagers.

Question 2: Parental mediation questions

Please indicate which of the following situations is applicable to your family:

On which of the following media devices do you implement restrictions on the children (6-12 years)/ teenagers (13-18 years) in your household? (**Restrictive mediation**)

- Television
- Computer or laptop use during leisure time (internet surfing, social networking sites)
- Mobile phone/smartphone
- Tablet
- There are no restrictions implemented on these media

On which of the following media devices do you discuss or explain the *advertising* with the children (6-12 years)/ teenagers (13-18 years) in your household? (**Active mediation**)

- Television
- Computer or laptop use during leisure time (internet surfing, social networking sites)
- Mobile phone/smartphone
- Tablet
- Advertising on these media is not discussed

Chapter 5: Parents' perceptions

On which of the following media devices do you discuss or explain the *advertising techniques* with the children (6-12 years)/ teenagers (13-18 years) in your household? (**Active mediation**)

- Television
- Computer or laptop use during leisure time (internet surfing, social networking sites)
- Mobile phone/smartphone
- Tablet
- The advertising techniques on these media are not discussed

On which of the following media devices do you discuss or explain the *advertising's intent* with the children (6-12 years)/ teenagers (13-18 years) in your household? (**Active mediation**)

- Television
- Computer or laptop use during leisure time (internet surfing, social networking sites)
- Mobile phone/smartphone
- Tablet
- The intent of advertising is not discussed on these media

On which of the following media devices do you watch the content together with the children (6-12 years)/ teenagers (13-18 years) in your household? (**Co-viewing**)

- Television
- Computer or laptop use during leisure time (internet surfing, social networking sites)
- Mobile phone/smartphone
- Tablet
- The content on these media is not watched together

Question 3:

What is your age?

Question 4:

What is your gender?

- Male
- Female

Question 5:

What is your highest completed level of education?

- Lower secondary school
- Higher secondary school
- Professional Bachelor's degree
- Academic Bachelor's degree
- Academic Master's degree

Question 6:

Please use the field below to enter any specific comments you might have concerning advertising to minors or about this questionnaire.

This is the end of the survey. Thank you for your cooperation.

Chapter 6

Co-creating advertising literacy awareness campaigns for minors^{1,2}

¹ Manuscript published as : Daems, K., Moons, I. & De Pelsmacker, P. (2017) "Co-creating advertising literacy awareness campaigns for minors", *Young Consumers*, Vol. 18 Issue: 1, pp.54-69, doi: 10.1108/YC-09-2016-00630

² An earlier version of this manuscript was presented at the 2016 ICORIA conference in Ljubljana, Slovenia.

Chapter 6 Co-creating advertising literacy awareness campaigns for minors

Abstract

The present study explores which media 9 and 10-year-old children and 12 and 13-year-old teenagers encounter and which campaign elements (media, spokesperson, appeal and message) are most appreciated by these target groups in awareness campaigns to raise their advertising literacy. The study applies a methodology that is commonly used in design sciences to the field of advertising. Co-creation workshops with minors and professionals are used for the development of awareness campaign stimuli. In the first study four co-creation workshops with 19 children (11 girls and 8 boys) of the 4th grade and four co-creation workshops with 16 teenagers (10 girls and 6 boys) of the 7th grade were organised. In the second study, nine professionals who work for and/or with minors or have experience in product design or marketing, participated in a co-creation workshop. The findings show that children are best approached through traditional media, whereas social media are used best to reach teenagers. Children prefer cartoons, whereas the results for the most appealing spokesperson in teenagers are mixed. Humorous campaigns with a short message are preferred by both target groups. The results offer implications for practice and public policy with respect to awareness campaign building and social media marketing campaigns targeted at children and teenagers.

1 Introduction

Children and teenagers are seen as a relevant target group by advertisers since they function as economic actors themselves and influence the purchase decisions of their families (Buckingham, 2009; Calvert, 2008). Nowadays, children and teenagers live in a world dominated by both traditional and online interactive media in which advertising is ubiquitous. As a result, advertising is omnipresent in children's and teenagers' lives (Blades et al., 2014; Calvert, 2008) and advertisers' efforts and expenditures to target them have expanded (Livingstone & Helsper, 2006; Moore, 2004). As a consequence, children and youngsters frequently encounter commercial messages. The amount and type of advertising minors are exposed to depends largely on their media use. Media use is strongly related to their age (Common Sense Media, 2015; Ofcom, 2016; Zarouali et al., 2015). Despite the availability of various online media, television is still one of the most popular media channels today amongst

children between six and twelve years old. Watching television is their most dominant media activity (Common Sense Media, 2015; Zarouali et al., 2015). On average 62% of American children between eight and 12-years old watch television each day (Common Sense Media, 2015). When they reach teenage years, this is about 58%. Next to television, watching videos on YouTube is a common, popular media activity amongst children (Apestaartjaren, 2016). Moreover, in Europe there is a tendency that children between nine and 16 years old start using online devices from a younger age onwards at more occasions and in different places during their daily lives than before (Livingstone, Haddon, Görzig, & Ólafsson, 2010).

When children mature into teenagers, the importance of television diminishes and the use of social media and mobile devices increases (Apestaartjaren, 2016; Zarouali et al., 2015). Children mostly play games on a tablet or a smartphone. The smartphone is the most used game device amongst Flemish teenagers (Apestaartjaren, 2016). During the past years, the importance of several social media amongst Flemish teenagers has expanded (e.g. YouTube Facebook, Snapchat, Instagram) (Apestaartjaren, 2016). In 2015, almost every teenager in Flanders, Belgium (97.6%) has watched a video on YouTube. Video bloggers (so called '*Vloggers*') are extremely popular amongst teenagers. Research on the perception of teenagers towards advertising shows that advertising is perceived as irritating by 65.7% of the Flemish youngsters. They try to avoid advertising as much as possible (Apestaartjaren, 2016).

With respect to advertising aimed at minors, two phenomena have become important in the way in which children and teenagers are approached by advertisers, i.e. *integration* and *interactivity*. Integration refers to the inclusion of persuasive advertising messages in media or entertainment context (Buijzen et al., 2010; Calvert, 2008; Wright et al., 2005).

Novel, more implicit and integrated advertising techniques have emerged as a result of developments in communication technologies (Blades et al., 2014). Compared to traditional advertising techniques such as television commercials, these implicit advertising formats embed commercial messages in (interactive) entertainment content and virtual environments. The integration of commercial messages blurs the line between advertising and other media content (e.g. product placement, advergames, online behavioural advertising, etc.) (Blades et al., 2014; Calvert, 2008; Kunkel et al., 2004; Wright et al., 2005). Since even for adults it is difficult to be aware of embedded advertising tactics, it is even more challenging for children and teenagers to recognise integrated, implicit advertising formats that try to persuade them, because they often lack the cognitive abilities to do so (Friestad & Wright, 2005; Moses &

Baldwin, 2005; Rozendaal et al., 2010; van Reijmersdal, Rozendaal, & Buijzen, 2015). Rozendaal et al.'s (2010) findings show that, at age 12, children have not reached the cognitive ability yet to understand television advertising's persuasive intent as adults do. It can be assumed that children's ability to understand novel, implicit advertising is even more underdeveloped.

The concept of 'interactivity' is inherent to the Internet (McMillan & Hwang, 2002) and relates to all media activities and advertising that is happening in the online world. The interactive character of current advertising practices leads to phenomena that are less present in traditional advertising, such as the integration of commercial messages in interactive and entertaining media content. One of the major issues in that respect is privacy concerns (Buckingham, 2009; Tuukkanen & Wilska, 2015). New online advertising formats often try to collect personal data from the receivers of the advertising messages by persuading them to create an account or to register in order to receive future information about the product or brand (Bright & Daugherty, 2012). Children and teenagers are not always aware of the amount of information they disclose online and advertisers' potential usage of this information. As a result, especially minors are vulnerable to these tactics (Wilking et al., 2013; Youn, 2008).

The Persuasion Knowledge Model (PKM) (Friestad & Wright, 1994) describes how individuals develop persuasion knowledge and how they use this knowledge to cope with marketers' and advertisers' persuasive attempts. Persuasion knowledge develops depending on basic cognitive skills and insights into social encounters. The PKM posits that *product knowledge* (knowledge about the advertised product), *agent knowledge* (knowledge about the advertiser behind the persuasive attempt) and *persuasion knowledge* (knowledge about advertising formats and persuasive tactics) are crucial factors to process advertising (Wright et al., 2005). The more easily identifiable a commercial message and the persuasive attempt made is, the more likely it is that persuasion knowledge will be activated (Tutaj & van Reijmersdal, 2012). Although Friestad and Wright (1994) did not explicitly have minors in mind, it is clear that the skills required to develop persuasion knowledge develops through the stages of childhood and adolescence (Wright et al., 2005). The difficulty for children and teenagers growing up in the current media environment is to identify interactive and integrated commercial messages as advertising when these messages are disguised as being part of other media content. As a result minors' persuasion knowledge will be activated less automatically or not, since the elements triggering this knowledge are less notably present. This can ultimately lead to advertising that influences minors in an unconscious manner.

Due to the implicit nature of integrated (interactive) advertising formats, the privacy concerns raised, and the lack of persuasion knowledge, it is important to raise awareness amongst minors in order to inform and educate them about these advertising techniques. The knowledge a person has about advertising, the specific advertising techniques used, as well as the persuasive intentions behind these techniques is referred to as *advertising literacy* (John, 1999; Rozendaal, Buijzen, et al., 2011). Being able to distinguish advertisements from editorial context and to recognise the persuasive tactics and intentions behind them, are two crucial components of advertising literacy (Blades et al., 2014; John, 1999; Livingstone & Helsper, 2006). A study comparing traditional and non-traditional advertising formats with children aged 6-7 years and 9-10 years found that many children consider novel, implicit advertising formats merely as a type of entertainment (Owen et al., 2014). This finding demonstrates the need to raise awareness in minors concerning advertising practices to increase their advertising literacy and to activate their persuasion knowledge in order to make them critical and informed consumers, and enable them to make informed decisions and to protect and defend themselves against misleading advertising messages or tactics (Buckingham, 2009; Livingstone & Helsper, 2006).

One way to raise advertising literacy is the use of awareness campaigns. In order to develop an advertising literacy awareness campaign to reach children and teenagers effectively, it is necessary to gain insight into the different media contexts these target groups encounter in their daily lives, and to explore which message components of an awareness campaign, such as the medium, spokesperson, appeal and concrete message, are appealing (De Pelsmacker et al., 2017). The purpose of the current study is, by means of co-creation workshops, to generate insight into the exposure of 9-10 and 12-13 year old children to media contexts, their perception of advertising in these media, and their appreciation of campaign elements, in order to develop effective advertising literacy awareness campaigns. Our first research question is:

RQ1: In terms of reach and preference, which are the best media contexts to reach 9 and 10-year-old children and 12 and 13-year-old teenagers to spread an awareness campaign on advertising literacy?

The second research question focuses on four components of an awareness campaign; media channel used, spokesperson, appeal and the concrete message. It is important to learn which implementations of these elements are most appreciated by the target groups:

RQ2: How should media, spokespersons, appeals and concrete messages be implemented in awareness campaigns to generate positive attention of 9 and 10-year-old children and 12 and 13-year-old teenagers?

The age groups used in this study correspond to two stages in the consumer socialisation process of children (John, 1999). Children between 9 and 10 years of age belong to the *analytical stage* and children in the 7th grade (12 and 13 years old) belong to the *reflective stage*. According to John (1999), children have the ability to understand advertising and marketing only from the reflective stage onwards because only then children have a sufficiently developed way of reasoning and gain more insights in the understanding of people's perspectives. Therefore, 12 to 13-year-olds are the focus of this study. Additionally, a survey amongst both advertising professionals and parents of minors showed that the best age to inform minors about the commercial intentions behind advertising is on average 10-years (Daems et al. 2017). The second target group is therefore 9 to 10-year-olds.

The methodological contribution of the current study is the use of co-creation workshops and techniques for the development of advertising stimuli, to be used in advertising literacy awareness campaigns. Sanders and Simons (2009) define co-creation as *any act of collective creativity that is experienced jointly by two or more people*. The current study focuses on co-creation with two stakeholder groups, i.e. the receivers of future awareness campaigns (children and teenagers) and professionals who work for and/or with minors and who have experience in the advertising and marketing field. Co-creation workshops with children, teenagers and professionals aimed at developing awareness campaigns is, to our opinion, a novel research method in the field of advertising. The current study uses co-creation tools and techniques from product design sciences and applies them to advertising. The advantage of the use of co-creation in this study is that insights can be generated jointly with stakeholders (professionals working with/for minors) and receivers (children and teenagers) of future awareness campaigns on the topic of advertising literacy, that cannot be generated otherwise. By means of co-creation, information that can enhance the effectiveness of awareness campaigns can be obtained directly from the children, teenagers and professionals themselves instead of relying merely on information from professional campaign designers.

2 Method

Two studies are reported with identical research objectives, but different participants and tools: minors (both children and teenagers) in the first study, and professionals working for and/or with minors in the second study. The research objective of both studies is twofold: to explore which media 9 and 10-year-old children and 12 and 13-year-old teenagers encounter in their daily lives and, as a consequence, are therefore best suited to reach these target groups (RQ1), and to investigate in which way four campaign elements (media channel, spokesperson, appeal and specific message) should be developed to generate positive attention of the two target groups (RQ2). The methodology is described separately for each study. The results of the first study were used as input for the second study.

2.1 Study 1: Children and teenagers

2.1.1 *Participants*

Four co-creation workshops with children from the 4th grade (9 and 10 years old) and four co-creation workshops with teenagers from the 7th grade (12 and 13 years old) were held in October and November 2015. Two groups of each age category participated in co-creation workshops with respect to each of the research questions. Respondents were pupils of two class groups of a school in a large city in Flanders, the Dutch-speaking part of Belgium. In total 19 pupils of the 4th grade (11 girls and 8 boys) and 16 pupils of the 7th grade (10 girls and 6 boys) participated in the study. Parental permission (active, informed consent) was obtained. Parents were informed that the workshop was recorded on video and that the videos were only used for the research objective of this study (see appendix 8.3). Pupils were rewarded for their participation.

2.1.2 *Creation of the workshop scenarios*

Twelve master students in product design sciences facilitated the workshops in return for credits for an elective course on co-creation facilitation. In a preliminary session on advertising literacy, the students were randomly divided into four groups of three students each. The session introduced them to the purpose of the study and the objective of the co-creation workshops. In cooperation with the researchers, the groups of students had to create workshop scenarios to obtain answers to the two research questions. The session ended with scenarios for four different workshops, two workshops answering one particular research question each. To avoid inter-moderator differences, two different student groups facilitated one workshop each per

research question. The four different workshops were used for both age groups, resulting in eight workshops in total.

2.1.3 Co-creation workshops

The co-creation workshops took place in school during the first two hours of the school day (100-120 minutes) in a room which was not used for teaching tasks. Organising the workshops in a different room than the class room was important to stimulate creativity and out-of-the-box thinking of the pupils. Otherwise, the classroom environment could prevent creative thinking of the children (Vaajakallio et al., 2009). The children of each of the age categories were randomly assigned to four groups (resulting in eight groups in total). Each group contained four to five pupils, both boys and girls. Four to five participants is the ideal group size for workshops, especially for children (Gielen, 2008). The co-creation process in each workshop was moderated by three master students. One of the students acted as an observer and took notes. The other two master students facilitated the workshop. Each group had a video camera at their disposal to record the workshop. During the co-creation workshops the researcher observed the workshops and took notes.

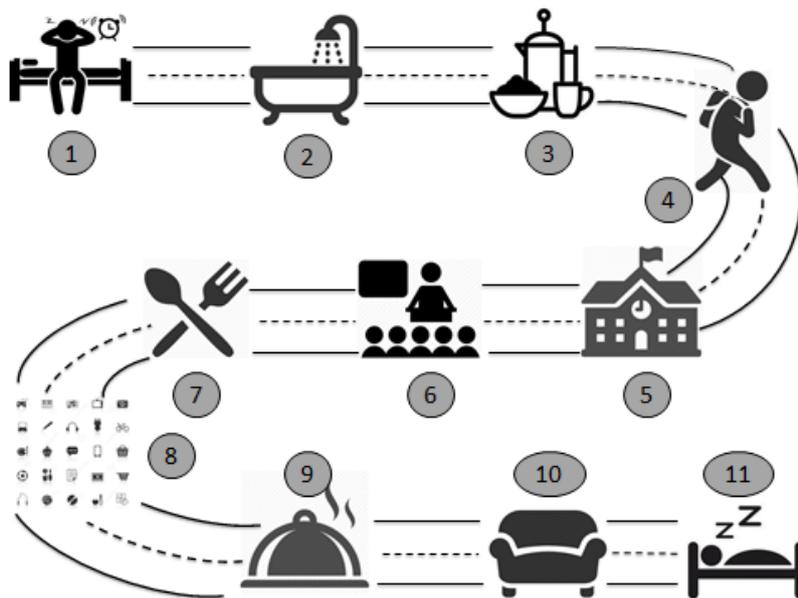
Each workshop followed a scenario structured around four topics. First, one of the students briefly introduced the purpose of the workshop to the participating pupils. The pupils were then asked to introduce themselves to the other children and the students, to make them feel at ease. All pupils were told that there were no right or wrong answers, and that they could freely express their ideas. This was followed by asking pupils questions about advertising in general, i.e. whether they know what advertising is, what they thought spontaneously when they hear the word ‘advertising’ etc. After this introduction, each workshop continued with a group-specific workshop scenario. These scenarios are briefly explained in the next sections.

Customer journey

The four workshops with a focus on the first research question (media contexts minors encounter) used the customer journey approach as a research technique. *Customer journey* is a framework used in service design to investigate customers’ behaviours, feelings, motivations and attitudes across a ‘journey’ and to search for solutions regarding problems that appear during the customer journey (Zomerdijsk and Voss, 2010). Applied to the development of awareness campaigns, the customer journey technique was used to **identify** all the relevant media and advertising contexts minors encounter during a normal school day and to explore

their attitudes towards advertising campaigns in these contexts. During the workshops the pupils went through their day from the moment they wake up until they go to bed, and reflected about all the things they consider as **advertisements**. To gain insights into their attitudes towards media and advertising in these media, the children went back to each of these advertising moments and enriched them with thoughts and feelings. They were probed to reflect whether they liked it to encounter advertising on these media channels or not. Figure 6.1 shows the customer journey.

Figure 6.1: Customer journey



Games

The four workshops that focused on the elaboration of the four campaign elements (media channel, spokesperson, appeal and specific message) to answer the second research question used games and brainstorming techniques as workshop tools. In order to have the children generate as many ideas as possible, the tools used had to be adapted to the environment children are familiar with. Games are often used as tools in co-design with children to have them reflect upon their experiences and to stimulate their creativity in order to overcome constraints (Vaajakallio et al., 2009). In the present study, an adaptation of the goose board game and a game using brainstorming techniques were used to explore which specific campaign elements draw most positive attention and are most appealing to the target groups. During the game, pupils had to answer questions about and discuss advertising and campaign elements, and had to complete advertising-related tasks. For example, pupils had to rank different existing

Chapter 6: Awareness campaigns

awareness campaign visuals from the campaign they preferred the most to the campaign they preferred the least. The moderators probed why the pupils ranked the campaign visuals in a particular order. When the question or task referred to one of the four main campaign elements, pupils had to discuss in group which type of element they preferred the most in a campaign. Finally, when all campaign elements were discussed, pairs of pupils had to make an advertisement consisting of the four campaigns elements chosen by the whole group for a specific product type.

The discussion about appropriate campaign elements, was structured on the basis of four components. These components were further specified into subcategories (Table 6.1). The subcategories of spokespersons are based on the content analysis of Reece, Rifon, and Rodriguez (1999). Their study indicated that nearly 50% of food commercials targeted at children featured animals, cartoon figures and real persons (adults, children, teenagers or celebrities). Mascots were not considered as a subcategory in their content analysis. However, a brand character can be considered as a mascot (Beirão, Lencastre, & Dionísio, 2005). The appeals are based on a content analysis of food marketing to children (Roberts & Pettigrew, 2007). From this study it appeared that fantasy, humour and action/adventure were the most often used appeals. Fear appeals were added as another potential appeal. A fear appeal could draw consumers' attention to privacy concerns. The fourth element of a campaign is the message itself. Children like music, jingles, animation and colours (De Pelsmacker et al., 2017). Therefore, the element 'message' can be subdivided into visuals, audio, specific language use and potential rhyme.

Table 6.1: Overview of different campaign elements and their subcategories

Medium		Spokesperson		Appeal	Message Specific characteristics of slogan or message: - Visuals - Audio - Language - Rhyme
Traditional	TV Print Radio Outdoor	Animal		Humorous	
Online Media		Brand Mascot		Fantasy	
Social Media		Cartoon figure		Fear	
Mobile Media		Human	- Peers - Older peers - Parents - Teachers - Celebrity	Action/Adventure	

2.2 Study 2: Professionals working with and for minors

In the second study, nine professionals who work for and/or with minors or have experience in product design or marketing, participated in a co-creation workshop (an organizer of a festival aimed at children and teenagers, an organizer of youth camps, a 3th grade teacher, an employee of a creative agency, two youth workers, a researcher in pedagogical sciences, a researcher in marketing, and a person with a background in product design). The purpose and the research questions of the second study were identical to that of the first study. At the beginning of the workshop, the professionals were randomly divided into two groups and were asked about their preferences for advertising, which campaigns aimed towards minors they perceived as inspiring, and which as unethical.

Study 2 used the customer journey technique with a persona as a projective tool to answer both research questions. A *persona* is a tool used in product design which represents a concrete fictitious target user and represents a group of customers or users with shared characteristics (Adlin & Pruitt, 2010; Miaskiewicz & Kozar, 2011). The fictional representation consists of a name, a picture, characteristics and a narrative created around the persona. The narrative created in this study was the customer journey. The results of the first study with minors were used as input to create two personas, one that represented each age group, and the customer journey. One subgroup received a customer journey for a 10-year-old boy and the other subgroup for a 13-year-old girl. The professionals had to discuss in group whether the moment(s) when the persona encountered the fictitious awareness campaign was/were effective to use towards the target group represented by the persona. Additionally, the effectiveness of the four campaign elements (medium/media, spokesperson, appeal and concrete message) was discussed.

3 Data analysis

Within a week after the workshops took place, each group of master students provided the researcher with a short written report about the workshops. The researcher watched and analysed all workshop videos, as did the master student who made notes of the workshop with the professionals. Videos were analysed by transcribing all video material.

The data obtained was analysed with *NVivo*, a software package designed to analyse qualitative data. Both an *a-priori* and an *inductive* approach were used to code the data (Mortelmans, 2007). The *a-priori approach* starts from a codebook to attach codes to the obtained

information. In the present study, the codebook referred to different media channels, subcategories of the campaign elements and the different moments during a specific day in children's and teenagers' lives (customer journey). Data which could not be coded according to the media contexts and the campaign elements, but which provided relevant information to answer the research questions, were coded according to the *inductive approach*, which focuses on information that emerges from the data itself.

4 Results

4.1 Media and advertising contexts of 9 and 10-year-old children

Children of the 4th grade use both traditional and online media. Television is the most popular media channel in this age group. Digital media, such as computers, laptops, tablets and smartphones, are mainly used to play games or to watch online videos. Children encounter most advertising during the evening and in the morning, whereas advertising is encountered the least during their time at school. Children spontaneously refer to traditional television advertising as the most familiar advertising format. Especially on their way to school, children also notice outdoor advertising, such as, billboards or posters.

Children are aware of advertisers' commercial intentions and the potentially misleading character of advertising: "*Sometimes not everything advertising says is true, since they tell or write some things which appear not to be true*". Some children are aware of video advertising on YouTube and sponsored messages along search engines' search results. Other pupils mention having noticed advertising as *overlayers* which appear in between levels while playing games. These implicit advertising techniques were, however, not mentioned spontaneously by children. The moderators had to trigger them to think about potential advertising they encounter while interacting with digital or mobile media. Moreover, novel advertising formats that were noticed, appeared to be of a non-integrated nature (e.g.: overlayers), since they appear separately or independent of media- or programme content. Therefore, they can rather be considered as online or mobile appearances of traditional advertising formats. For instance, overlayers which appear between game levels resemble a traditional 30-second spot which appears between different parts of a television programme. Furthermore, children report that they only encounter online advertising rarely, whereas in reality they are exposed to online commercial messages several times a day. These results show that it remains important to raise awareness of integrated advertising formats which are embedded in media- or programme

context since children do not notice embedded advertising formats and the persuasive intentions behind them themselves.

Although they express that advertising blocks on television can be boring, they prefer this type of advertising the most. Children consider advertising that appears in games annoying. As one boy described it: *“If I cannot skip the ad, it irritates me and I get mad”*. As a result, they mention that they try to circumvent these advertisements by closing the banners whenever possible. This indicates that a positive attitude towards a particular media channel (e.g. tablets for gameplay) does not necessarily lead to a positive attitude towards commercial messages placed in these media channels. Consequently, in order to generate positive reactions towards an awareness campaign, attention should be paid to the attitudes children express towards advertising or campaigns placed in these media, and not to the attitude towards the media channel alone.

There is some disagreement amongst the professionals whether television is still an important medium amongst 9 to 10-year-old children. *X: “I perceive television as an outdated medium. (...) Nowadays, television functions more as a background medium. Children will turn the television on, but at the same time they are watching YouTube videos on their tablet. As such, you notice that watching television has changed and children do not like the idea that the programmes do not appear at that specific moment when they want them to appear”*. Another participant agreed with this and added: *“They put both the television and the tablet on, but on YouTube they can access and search more easily and actively the content they are looking for”*. However, the teacher of the 3th grade notices that television viewing is still important to her pupils. Professionals mention that *YouTube* is an important platform in children’s lives, and that it could be an opportunity to work with popular video bloggers (so called ‘*vloggers*’) who are several years older than the children of the target group, to enhance the distribution and persuasiveness of an awareness campaign.

The results of the workshop with professionals seem to correspond more or less with the findings of the workshops with the children themselves. Both television and online media (especially *YouTube*) are popular amongst 10-year-old children. Especially television in the early evening is particularly popular amongst children of the 4th grade. Outdoor advertising is noticed by children on their way to school as well. Online video blogs in collaboration with a popular video blogger appear to be an appropriate channel to attract 9 and 10-year-old children. In-game ads should not be used as a channel to spread an advertising literacy awareness

campaign, since children hold negative attitudes towards this type of advertising and try to avoid it.

4.2 Media and advertising contexts of 12 and 13-year-old teenagers

Social media and mobile devices (tablet and smartphone) are heavily used by teenagers. Teenagers use these devices especially in the evening. Smartphones are used in the morning as well, but to a lesser extent. Tablets are mainly used to play games. Facebook, WhatsApp, Instagram, Spotify and YouTube are the most popular social media and applications used. Teenagers do not use traditional media in the morning, whereas they do watch television in the evening. Therefore, television and, more importantly, social media are the most appropriate media channels to reach teenagers from the 7th grade.

Traditional television advertising is also mentioned spontaneously by teenagers. Teenagers are aware of the commercial intention behind advertising: *“Advertising serves to let people buy things or to download things on Facebook”*. They express having noticed sponsored messages amongst their Instagram pictures. They encounter advertising for other games while playing casual games on their smartphones. One teenager mentioned that advertising messages appear between search results in Google: *“If I search for something on Google, advertising appears between the search results on the right side on the screen in yellow or with the text ‘ad’ next to it”*. From these results it is clear that teenagers are aware of some online advertising formats. However, information about novel, integrated advertising formats and how they work needs to be explained to them (product placement, online behaviour advertising). Online behavioural advertising is a technique by which individuals are targeted by advertisers, based on their previous surfing behaviour on the Internet (Smit et al., 2014). Although teenagers have an enhanced advertising knowledge compared to pupils from the 4th grade, it is still necessary to educate them and to make them aware of advertising formats and commercial tactics.

Also according to professionals who work with youngsters, social media are very popular amongst teenagers. Moreover, it is mentioned that radio advertising is considered as something stupid for adults. They also mention that banner advertising in a game is not a good medium either to spread a campaign.

In sum, when teenagers are a target group for an advertising literacy campaign, social media appears to be the key medium to spread a potential media literacy awareness campaign.

4.3 Campaign elements appealing to 9 and 10-year-old children

4.3.1 *Medium*

As indicated previously, children of the 4th grade appear to have the most positive attitudes towards television advertising and video blogs on Youtube. Traditional media (television and billboard), mobile devices (smartphone and tablet) and social media (YouTube) are the most appropriate advertising media to spread an awareness campaign. The use of in-game advertising is annoying. Children try to avoid pop-ups in games and videos by closing them. Marketing professionals consider linking an advertising literacy awareness campaign to educational packages at school as a good alternative to a media campaign.

4.3.2 *Spokesperson*

Both boys and girls have a preference for advertising showing models of their own gender. Boys have a preference for cartoon figures, whereas girls prefer the use of real persons, such as peers or celebrities. In the end, cartoon figures were chosen as spokespersons by the whole group. Professionals notice that both cartoons and well-known persons such as local and popular celebrities can draw children's attention to a particular campaign. However, they warn for the potentially undesired effect that celebrities can draw all the attention to themselves, with the risk of the target audience not paying attention to the campaign message. Furthermore, the use of a well-known figure can easily fade over time. As a result, the choice between a cartoon or a celebrity should be considered carefully. Another idea mentioned by professionals was the organisation of a flash mob at school with the cartoon figure or mascot used in the campaign.

4.3.3 *Appeal*

Two different appeals were preferred, namely a humorous appeal and a playful, fantasy appeal with colourful elements. It could be recommended to combine both elements, in order to create a humorous campaign with a playful atmosphere consisting of several, colourful elements. The professionals added that children like humour used in cartoons or slap stick humour. Potential elements used in a humorous appeal towards this age group can be slips of the tongue or teasing elements.

4.3.4 Message

Children prefer short messages. Campaigns that contain a lot of textual information are disliked. Marketing professionals add that jingles, music and rhymes are popular amongst children of the 4th grade.

4.4 Campaign elements appealing to 12 and 13-year-old teenagers

4.4.1 Medium

As mentioned before, teenagers associate advertising primarily with traditional television advertising, although various social media are much more popular with this age group than with the younger one. Especially YouTube is a popular medium. However, video pre-rolls are disliked. Also in-game ads are not an appropriate context to spread campaigns. Professionals emphasize that the medium that is used to spread the campaign should not be too cursory. For example, a bus stop (where people are waiting) should be preferred over a passing bus. The smartphone is mentioned as a medium that teenagers often use. However, to avoid reluctance amongst the target group, attention should be paid that mobile ads are not perceived as annoying.

4.4.2 Spokesperson

Both mascots and real persons are indicated as preferred spokespersons. Teenagers choose a mascot as a spokesperson because of its potential humorous nature and cuteness. The professionals recommend using a real person to prevent that the campaign would look too childish. Further, professionals add that it is important to create a link between the spokesperson and the teenagers. This can be done by linking the spokesperson to activities in teenagers' lives.

4.4.3 Appeal

Teenagers hold a strong preference for a humorous approach. They report that a humorous campaign is remembered more easily. The professionals agree *X: "Humour can work better than fear or a prohibition or a ban to have people act in a certain kind of way. (...) Nevertheless, here again attention should be paid that the humour used is not to childish"*.

4.4.4 Message

Teenagers prefer a clear, short message, as was the case with children from the 4th grade. Professionals confirm that it is best to keep the message short. They recommend using a positive

message instead of a negative one. According to teenagers, jingles, rhymes and funny music should be included in the message as well, since a message with a jingle or rhyme is more easily remembered. However, professionals mention that jingles or rhymes work better towards a younger age group. Teenagers prefer a slogan in English, since they consider English a cooler language than their mother tongue (Dutch). Moreover, teenagers express a dislike for advertising that is repeated. Personalisation seems to be a strategy which grabs teenagers' attention.

An important insight resulting from all workshops is that minors initially focus on the visuals of a campaign, instead of on the verbal elements of the message. Only if they were explicitly asked to concentrate on the message text, they paid attention to it. This finding is confirmed by professionals who also recommend to focus on the visual part of the campaign. The message should thus be made clear from the very beginning, and the visuals used in the campaign should be appealing enough to look further than the surface of the campaign. Furthermore, the professionals add that creating a narrative about the campaign and making a connection between the medium and the message can generate attention as well, and can ensure that the campaign message is kept in mind.

5 Conclusion and discussion

The purpose of the current study was exploratory, i.e. to gain insight into how to make youngsters aware of being the target of advertising, and into which campaign elements should be present in an awareness campaign to draw minors' attention to the topic of advertising literacy and in which media contexts such an awareness campaign should be placed. The current study focused on co-creation in workshops with target groups of a potential awareness campaign on advertising literacy and stakeholders involved with the subject or the target groups.

This study also touches upon the question to what extent children and young teenagers are adequately coping with current advertising formats that they encounter during their customer journey. The Persuasion Knowledge Model describes how different knowledge structures develop and how individuals use them to cope with persuasive attempts made by advertisers and marketers. Although minors to a certain extent recognise advertising formats and understand their persuasive intent, our results indicate that this is only the case for traditional formats, such as television or outdoor advertising or online advertising formats that mimic

traditional advertising, such as overlays or banners. However, children and teenagers do not spontaneously identify or recognise more novel, integrated formats, such as product placement or behavioural advertising, that are harder to identify as advertising. As expected, this is more outspoken the younger the minors are. The more easily recognisable a commercial message is, the more likely the activation of persuasion knowledge (Tutaj & van Reijmersdal, 2012). The development of advertising literacy could enhance minors' knowledge about novel advertising formats, which can eventually lead to the activation of the different components of persuasion knowledge when they are confronted with persuasive messages.

Overall, the results show that each age group should be approached partly differently according to their own skills, interests and needs. This corresponds to the stages in consumer socialisation of childhood in which both age groups of the present study belong to different stages (John, 1999), and also to partly different patterns of media use. As to the latter, the findings of the current study confirm that minors' media use and the advertising they encounter depends on their age, as was found by Zarouali et al. (2015) and Apestaartjaren (2016). Despite the popularity of online media, traditional media, such as television and outdoor advertising, remain very important for the youngest age group (9 and 10-year-old children). Online media are specifically used to play games or to watch funny videos in the evening. These results correspond to the media use reported by Zarouali et al. (2015). Video blogs are extremely popular amongst children of the 3th and 4th grade. As children mature into teenagers, their time spent online increases and the purpose of their media usage shifts. The interpersonal and social context becomes more important, hence the importance of having their own smartphone and the popularity of social media amongst teenagers (Apestaartjaren, 2016). In Flanders, 40.9% of the children in primary school possess their own smartphone, whereas this number increases to 90.5% when they enter the 7th and 8th grade. In the present study, teenagers use online and social media to play games as well, but to a lesser extent than children of the 4th grade.

Attention should be paid to minors' attitudes towards advertising and campaigns embedded in different media channels. The popularity of certain media types within a particular age group does not necessarily lead to positive attitudes towards advertising and campaigns embedded within these media. Children and teenagers frequently mention that they dislike or even hate to be disturbed by advertisements when playing a game or watching a video. This result is in line with the findings of Apestaartjaren (2016), that a majority of Flemish youngsters perceives advertising as irritating and try to avoid it.

With respect to the spokesperson in a campaign, the results of our study show that characters with male characteristics, with whom both boys and girls can identify, are most appealing. This strategy is indeed often applied by marketers who target children (Acuff, 1997). Pupils from the 4th grade show a preference for a cartoon figure, whereas for teenagers of the 7th grade, a real person appears to be most appropriate, in order to prevent the campaign from being too childish, as this can be a risk when cartoons are used towards this target group. Professionals add that it is important to have the spokesperson involved in a narrative and linked to life experiences and the environment of the target group. This strategy is applied by the usage of brand characters as well (Hémar-Nicolas & Gollety, 2012). Both age groups prefer a humorous appeal. However, the preferred humorous execution is different in each age group. Slap stick humour with slips of the tongue is most appreciated by children, whereas a humorous appeal towards teenagers should not look too childish. As indicated by (Sayers, 2006) and the professionals who participated in the workshop of the current study, both age groups show a preference for a brief, clear and simple message. Usage of colourful visuals and images could enhance children's memorability of the campaign, whereas teenagers express a preference for sounds or a catchy jingle. Children's preference for colourful visuals and images is in line with the findings of managers' strategy in the usage of brand characters towards children (Hémar-Nicolas & Gollety, 2012).

6 Implications for marketing and public policy

The current study has a number of implications for marketing practice and public policy. It is recommended to use both traditional media channels (television, and billboards), and online media channels (video blogs or YouTube videos) to generate awareness in 9 to 10-year-old children. Due to the popularity of social media amongst teenagers, social media appear to be the most suited channel to spread an advertising literacy campaign amongst teenagers of the 7th grade. The results also show that minors do not encounter advertising much within their school environment. Since there is not much ad clutter within the school context, the school environment could also function as a potential channel to spread awareness campaigns on advertising literacy. Such a campaign can also be linked to educational packages on the topic of advertising literacy (Hudders et al., 2016; Nelson, 2016). Children and teenagers dislike pop-up advertisements during games or videos. Consequently, these media channels should not be used to spread an awareness campaign since the major challenge for social marketers is to draw attention in an overly cluttered media environment and to compete against commercial

marketers who are better funded (Evans, 2008). When targeting children, a cartoon figure should be used, whereas for teenagers a real person appears to be most appropriate. Both boys and girls can identify with a male spokesperson or cartoon figure. Spokespersons or brand characters should be integrated in a narrative and linked to life experiences and the environment of the target group. Both children and teenagers prefer a humorous appeal and brief, clear and simple messages. Colourful visuals and images should be used for children, whereas teenagers have a preference for sounds or a catchy jingle.

Besides implications for marketing communication practice, our results also have public policy implications. Governments, public policy organisations and consumerist organisations could use our insights to develop awareness campaigns and/or to integrate messages in, for instance, educational packages for schools. Our insights can also be used to develop awareness campaigns for other issues that are relevant for children and teenagers, such as traffic education, promotion of healthy behaviour, protection of nature and environment, etc.

The study uses a co-creative methodology to avoid the more rational and deductive way of finding answers to a research question in traditional survey studies. The methodology starts from the real-life experience of children and teenagers, taking their customer journey concerning media use and advertising into account. It allows to playfully and more spontaneously explore their knowledge, concerns and motivations. The idea generation and early concept developments with youngsters was used as an input for the workshop with the other stakeholders leading to an iterative knowledge building process. Further, the current research explored the use of specific tools that were developed to stimulate divergent and convergent thinking during these specific workshops, which can also be used in other research with these age groups.

7 Limitations and further research

Due to its limitations, the current study also provide other avenues for further research. All participating pupils study at the same school located in a large city in Flanders. This implies that all pupils have more or less the same socio-economic background and characteristics. Future studies should involve pupils from different types of schools and schools which offer different study tracks. Moreover, it appeared that some pupils received a lesson on advertising in primary school. Therefore, some results can be distorted and can give the impression that certain teenagers have a good knowledge about advertising already. However, advertising

literacy is not an obligatory educational subject in Flemish schools, and not all schools offer it to their pupils. Hence, teenagers' overall level of advertising literacy might be lower than the level of some teenagers who participated in the workshop. A replication of this study amongst younger children and older teenagers is also called for, since media use and appreciation for campaign execution elements can differ substantially between age groups.

The standard theory about advertising literacy development in different stages in children and teenagers' lives was proposed in the era of traditional media and advertising formats. The perspective of the current study was to gain insight into the development of persuasive advertising literacy campaigns in traditional media as well as in more integrated and interactive online campaigns. Our results suggest that this framework needs to be reconsidered, as the expectation is that minors' advertising literacy will develop slower as advertising tactics become more interactive, integrated and sophisticated. More research is thus needed into the impact of novel advertising formats on the evolution of minors' advertising literacy.

Besides testing our findings by setting up formal experimental studies in which the effectiveness of these campaign elements is assessed, the insights of the current study can also be used to develop advertising awareness with different tactics and formats. For instance, serious games to enhance advertising literacy could be developed and tested, in which the insights of the current study are applied. These games could be promoted and spread via social media and/or used in class. Our insights can also be used and tested in other novel formats. For instance, video bloggers could be approached to spread advertising literacy messages and their effect. Advertising literacy could also be enhanced by adding disclosure cues in offline and online media content that contains commercial messages (for instance an overlay that explains that part of the content has a commercial intent).

Looking to the future, with the emerging Internet of Things trend, different types of persuasive tactics may appear in children's everyday life, in the things they use or the toys they play with. For instance, sensors that in a more direct way monitor or measure or even influence behaviour may be integrated in the packaging of toys or food, or in the toys themselves, or at the locations they visit. These tactics would go beyond children consciously or unconsciously interacting with advertisers. They are about leaving traces that are captured by the things that surround them and that might be used for commercial purposes. In the near future, tools for advertising literacy development should be prepared to cope with these eventually new persuasive communication strategies.

8 Appendices

8.1 Extra information workshops children

8.1.1 Customer journey

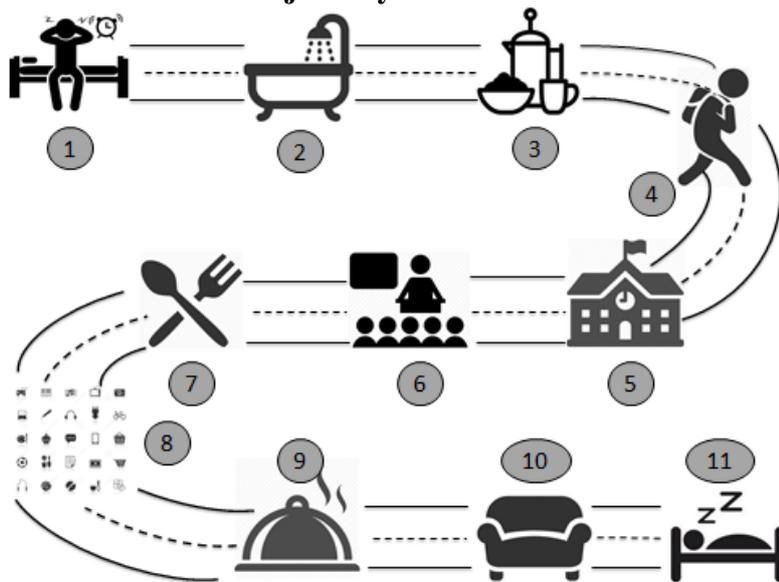
2 workshops organised the customer journey around three different times of the day which cover a whole day, namely; the morning, the time spent at school, and the evening. For each time of the day a large sheet of paper was attached to the wall. Each pupil got a sticky dot in a different colour. Subsequently, pupils had to think about different media channels they use or encounter during each time of the day and whether they get in contact with advertising in these media or not. The media types mentioned were written on a large sheet of paper by the pupils. To complete the answer sheets, pupils were shown pictograms of different media types (stimuli). If children were aware that they used or were exposed to these media types during the different times of the day, they had to place these stimuli on the paper sheet together with their sticky dot, next to the written words. Students probed the pupils to reflect whether they liked it to encounter advertising on these media channels or not. Picture 1 shows a photo taken during the co-creation workshop session of the first group.

Picture 1: Customer-journey – three times of the day



The other 2 workshops organised a customer journey from the moment the children woke up until bedtime. These groups took more activities and habits, which occur during a typical school day, into account. They drew the whole journey on a large sheet of paper. Here again, as part of the divergent phase in a design process, the children had to reflect about the media channels and advertisements they encountered during different moments of the day. Each pupil was given a set of six different emoticons ranging from extreme liking to extreme disliking. The pupils had to place these emoticons next to the context or media type according to their attitude towards these media contexts (sticky-dot voting). This made it possible to examine in which specific media contexts children like to encounter advertising and where they did not. Picture 2 shows the customer-journey and Picture 3 gives an overview of the six different emoticons used for the sticky-dot voting.

Picture 2: customer journey:



Picture 3: Emoticons used for sticky-dot voting



8.1.2 Games

The other workshop groups focussed on the different campaign elements to include in the awareness campaign by means of games. Before the games were played, each group held a brainstorm session about advertising. The pupils had to write down their associations with the word ‘advertising’ on a large sheet of paper. The moderators then asked additional questions referring to the pupils’ answers. During the game, pupils had to answer questions about advertising or had to complete advertising related tasks. For example, pupils had to rank different, existing awareness campaign visuals from the campaign they preferred the most to the campaign they preferred the least. The moderators probed why the pupils ranked the campaign visuals in a particular order. When the question or task referred to one of the four main campaign elements, pupils had to discuss in group which type (subcategory) of element they preferred the most in a campaign. Finally, when all campaign elements were discussed, pairs of pupils had to make an advertisement consisting of the four campaigns elements chosen by the whole group during the game for a specific product type. Picture 4 shows the game board used for the adapted ‘advertising’ version of the goose board game.

Picture 4: Goose board game



8.2 Personas workshop professionals

Personas are given in Dutch

Basil



"Stoere jongen die altijd wil winnen"

Leeftijd: 10 jaar
Leerjaar: 4de leerjaar
Familie: 1 oudere zus (12 jaar) en 1 jongere broer (8 jaar)
Woonplaats: Peer
Karakter: Competitief, avontuurlijk en deugniet

Favoriete Mediakanalen

Televisie
 Online & Sociale Media (YouTube)
 Games (op tablet en smartphone)

Bio

Basil is een sportieve, competitieve jongen. Zijn hobby's zijn scouts en atletiek. Thuis hebben ze een hond Tobias als huisdier. Later wil Basil dierenarts worden.

Gedrag

- Basil gaat samen met zijn broers en zus met de fiets naar school. Hij merkt dan soms reclameposters en billboards naast de kant van de weg op. Posters met veel tekening vindt hij cool. Posters met veel tekst op vindt hij saai.
- Wanneer hij thuiskomt speelt hij heel graag spelletjes op de tablet die hij moet delen met zijn broer en zus.
- Na het avondeten kijkt het hele gezin samen naar televisie. Televisiereclame vindt hij wel leuk omdat dit veel kleuren en beelden bevat.
- Hij bekijkt graag grappige cartoon filmpjes op YouTube.

Persoonlijkheid

- Basil wil altijd winnen. Wanneer hij verliest kan hij heel driftig zijn.
- Kijkt op naar zijn stoere buurjongen die een paar jaar ouder is.
- Hij houdt ervan om stiekem dingen te doen zonder dat zijn ouders dit weten.

Hatelijke kenmerken van reclame

- Heeft een hekel aan reclame die verschijnt tijdens het spelen van een spel.
- Iriteert hem als hij eerst een reclamevideo moet zien alvorens hij een grappige cartoon op YouTube kan bekijken.

Alexis



"Creatieve, sociale duizendpoot"

Leeftijd: 13 jaar
Leerjaar: 1ste middelbaar
Familie: Mexicaanse moeder en Belgische vader, oudere zus (16 jaar)
Woonplaats: Antwerpen
Karakter: Creatief en sociaal

Favoriete mediakanalen

Snapchat, Instagram & Facebook
 Televisie
 Game-applicatie smartphone (Candy Crush)

Bio

Alexis haar hobby's zijn tekenschool, muziekschool en toneel. Ze is een sociale meid en heeft veel vrienden die ze op school en bij haar hobby's heeft leren kennen. Alexis is vaak creatief bezig en verveelt zich niet vlug. Ze heeft een hekel aan lezen.

Haar ouders controleren haar mediagebruik niet echt. Ze moet enkel bij het slapengaan haar smartphone afgeven.

Gedrag

- Alexis gaat met de tram naar school. Tijdens de tramrit speelt ze Candy Crush op haar smartphone. Van de tramhalte moet ze nog een kort stukje stappen naar de schoolingang.
- Het schoolreglement laat niet toe dat ze haar smartphone gebruikt op de speelplaats. Toch doet ze dit soms stiekem als ze naar het toilet gaat.
- Wanneer ze thuiskomt moet ze eerst haar huiswerk maken van haar ouders alvorens zich met andere dingen bezig te houden.
- Alexis vindt het ontzettend leuk om tekeningen en filmpjes van haar muziekstukken te delen met haar vrienden via Facebook en Instagram. Dagelijks verstuurt ze ook Snapchats naar haar vrienden en klasgenoten. Ze doet dit na schooltijd als ze klaar is met huiswerk maken.
- Om kans te maken op coole gadgets en toffe spulletjes neemt ze vaak deel aan online wedstrijden. Ze ontvangt veel mails van kranten en websites en vraagt zich af hoe dit komt.

Leuke kenmerken van reclame

- Onder de douche zingt en neuriet ze vaak liedjes of rijmende slogans die ze oppikt van reclame.
- Gepersonaliseerde reclame zoals de actie van Coca-Cola met flesjes met voornamen op vindt ze heel leuk.
- Reclamespotjes met een grappige mascotte of een grappig persoon

8.3 Parental consent form in Dutch



Beste ouder,
Beste voogd,

datum

In functie van een onderzoek naar reclamewijsheid bij kinderen aan de Universiteit Antwerpen zijn wij specifiek op zoek naar leerlingen uit het 4^{de} leerjaar om deel te nemen aan onze studie. Het doel van deze studie is om samen met de leerlingen een concept voor een bewustzijns campagne omtrent reclamewijsheid uit te denken. Meer concreet zullen hiervoor workshops met kleine groepjes leerlingen georganiseerd worden. De bedoeling van deze workshops is om samen met de leerlingen te weten te komen hoe kinderen het best aangesproken kunnen worden in een bewustzijns campagne. Tijdens deze workshopsessies zullen er camera-opnames gemaakt worden om in het kader van het onderzoek de verkregen informatie te kunnen analyseren. Uiteraard worden deze opnames voor geen andere doeleinden gebruikt. De workshops zullen plaatsvinden op school op vrijdag datum tijdens de eerste 2 lesuren.

Mogen wij u vragen onderstaand strookje in te vullen en terug mee te geven met uw kind **datum**?

Indien u nog vragen heeft omtrent deze studie aarzel dan niet om ons te contacteren op volgend e-mailadres: kristien.daems@uantwerpen.be.

Meer informatie omtrent het project kan u vinden op volgende website: www.AdLit.be

Alvast bedankt voor uw medewerking.

Met vriendelijke groeten,

Kristien Daems – doctoraatsstudente Universiteit Antwerpen

✂

Gelieve onderstaande gegevens in te vullen en ondertekend via uw kind terug te bezorgen aan de school.

Indien u deze brief ondertekent dan geeft u toestemming dat er camera-opnames gemaakt worden.

Hierbij geef ik..... (naam ouder/naam voogd) mijn kind.....;..... (naam kind) de toestemming om deel te nemen aan de workshop in het kader van een onderzoeksproject omtrent reclamewijsheid aan de Universiteit Antwerpen.

- Hierbij geef ik toestemming voor camera-opnames zonder dat deze beelden voor andere doeleinden dan het onderzoeksproject rond reclamewijsheid worden gebruikt.

Handtekening ouder/voogd

Chapter 7

Conclusions, implications and further research

Chapter 7 Conclusions, implications and further research

1 Conclusions

The objective of this dissertation was to investigate the perspectives of three different groups involved in the debate concerning advertising aimed at youngsters: children and teenagers themselves as a target group of advertising, advertising professionals' perceptions concerning the use of online contemporary advertising formats aimed at youngsters, and parents' concerns and mediations strategies. The first section of this chapter presents a summary of the main findings of each study and answers the five research questions. An overview of the answers to the specific research questions per chapter can be found in table 7.1. Subsequently, implications for theory, advertising practice and public policy will be addressed. The chapter concludes with directions for future research.

RQ 1: What are the effects of integration and interactivity as advertising features on young teenagers' brand memory, brand attitude and their sharing of personal information, and how is this mediated by awareness of selling intent and critical processing?

Brand interactivity enhances memory effects and has a positive effect on brand attitude. The positive effect of interactivity on brand attitude was also found in previous research (Hang, 2016; Hang & Auty, 2011; Lee et al., 2014; Sundar & Kim, 2005). Integration has a negative effect on memory and does not influence brand attitude. A non-integrated, brand-interactive advertising stimulus leads to the best memory effects in terms of brand recognition and memory of product information. These results are in line with the Limited Capacity model of Attention (Kahneman, 1973) and the Limited Capacity Model of Mediated Message Processing (Lang, 2000). A non-integrated, brand-interactive ad leads also to the most positive brand attitude. No direct effects of brand integration and brand interactivity were found on personal data sharing. Personality traits that are linked to privacy, such as privacy concerns, risk aversion, and perceived benefits, might be more determining for the actual personal data sharing (Heirman et al., 2013; Walrave & Heirman, 2013) rather than the characteristics of advertising stimuli themselves. This might explain why no direct effect of integration and interactivity on personal data sharing behaviour was found. The effect of interactivity on personal information sharing is fully mediated by awareness of selling intent, critical processing and brand attitude.

Interactive stimuli lead to more awareness of selling intent. If respondents are aware of the selling intent behind the stimulus, this leads to less critical processing of the message. This shows that awareness of selling intent does not necessarily lead to critical processing, but that the coping strategy of youngsters is accepting the message without a critical mind-set. The Persuasion Knowledge Model (Friestad & Wright, 1994) initially refers to this coping mechanism as a ‘neutral’ direction of the responses (instead of a negative and critical direction only). However in light of advertising studies investigating persuasion knowledge and advertising literacy, the focus has shifted towards the activation of a critical evaluation in the majority of the studies. The results of the first empirical study in this chapter shows that youngsters seem to find presence of selling intent appropriate when they notice that the interactive message is actually an advertisement. Indeed, other research also shows that activation of persuasion knowledge does not necessarily lead to more critical processing (Avramova et al., 2018; Evans & Park, 2015). However, our results are remarkable in that we find a negative effect of awareness of selling intent on critical processing. In other words, once youngsters are aware of the selling intent of a stimulus, they seem to find the presence of a brand in media content more appropriate. The strongest mediation paths in the model were the positive effect of critical processing on brand attitude and the positive influence of brand attitude on personal data sharing. Integration has no effect on awareness of selling intent and personal data sharing. It can thus be concluded that brand interactivity as an advertising feature is most effective – at least from advertisers’ point-of-view - as it leads to the most positive outcomes in terms of cognitive, evaluative and conative ad responses.

RQ 2: What is the effect of personalised advertising on youngsters’ awareness of selling intent and word-of-mouth intention, and what is the moderating role of youngsters’ age and an advertising cue?

In accordance with the consumer socialisation model, results show that younger children are more prone to be influenced by advertising, as teenagers in the 7th grade have a higher awareness of selling intent than 5th graders. The presence of an advertising cue results in higher awareness of selling intent if the ad is personalised, but does not lower word-of-mouth intention for personalised advertising. Personalisation results in higher awareness of selling intent and higher WOM intention in 5th graders. Previous research has indeed found that noticing that an advertisement is personalised can raise awareness of selling intent (Baek & Morimoto, 2012; Simonson, 2005). The increase in WOM intention means that even when children are aware of the selling intent of an ad, this does not lead to negative behavioural intentions, quite the

contrary. This shows that developing and using a critical attitude is not the only possible outcome to cope with advertising. The Persuasion Knowledge Model (Friestad & Wright, 1994) shows that coping behaviour does not necessarily need to be critical and negative but might indeed consist of accepting the message as intended by the advertiser. Moreover, the possibility exists that the 5th graders in this study were overwhelmed by the presence of their favourite television personality and that this has caused a celebrity endorsement effect, resulting in positive responses, such as the willingness to share the stimulus with their friends and peers. Future research should investigate whether this mechanism is indeed at play. Personalisation does not lead to a higher awareness of selling intent nor does it lower WOM intention in 7th graders. This is a rather surprising result, as it was expected that – based on traditional consumers socialisation theories and PK development – personalisation would trigger 7th graders' awareness of selling intent and this would lead to negative behavioural outcomes. This shows that even 7th graders are susceptible for the effects of native advertising. An explanation might be that 7th graders as intense users of social media are used to and familiar with the presence of native advertising and commercial messages into other media content, and thus accept these messages without processing them in a critical manner. An advertising cue does not change 5th graders' awareness of selling intent, nor does it lower their WOM intention. On the contrary, 5th graders' WOM intention is even higher when an advertising cue is present. This is in line with previous research that found that an advertising cue does not necessarily result in negative ad responses and negative behaviour (An & Stern, 2011; Panic et al., 2013; Rozendaal, Lapierre, et al., 2011). While an advertising cue does not have an effect on 7th graders' awareness of selling intent and WOM intention, the direction of the effect, although not significant at conventional levels, show that an advertising cue has a negative impact on 7th graders' WOM intention. Teenagers of the 7th grade are to a certain extent cued processors, as it seems that they need a cue to lower their WOM intentions. Children in the 5th grade, who belong to the analytical stage in consumer socialisation, might not even have reached the 'cued processors' level, and are rather limited processors when confronted with contemporary native advertising, as the advertising cue even results in more positive behavioural intentions. These findings indicate that an update of traditional persuasion knowledge frameworks and consumer socialisation frameworks adapted to contemporary advertising formats is required. Such an update can consist of a framework that specifically indicates for several types of advertising formats which age corresponds to different stages of consumer socialization. This update should be based on research that uses the same measurement of persuasion knowledge, advertising literacy and responses to advertising.

RQ 3: What are the perceptions of Belgian advertising professionals regarding the ethical appropriateness and the use of contemporary advertising formats towards children and teenagers?

The results show that advertisers hold the same perceptions for contemporary online advertising formats as for traditional advertising: the age of twelve is perceived as a milestone in children's understanding and advertising's ethical appropriateness. Moreover, advertisers explicitly refer to research on traditional advertising formats to justify their opinion. The age of 12 as boundary confirms to self-regulating initiatives such as the European and the Belgian Pledge, where 12 years is established as a border above which it is allowed to target teenagers, but prohibited below the border (EU Pledge, 2017a; The Belgian Pledge, 2017). Social media policies set 13-years as a rule from which age onwards it is allowed to create an account (Facebook Inc, 2017; Twitter, 2018). As mentioned by Zarouali, Verdoodt, et al. (2018), very little research to date has addressed the development of persuasion knowledge past the age of 12. They show that adolescents (12-17 years) have reached an adult (18-25 years) like level of persuasion knowledge of ads on social media only from the age of 16 years onwards, and that only at the age of 20 they had fully developed a conscious awareness of data collection and personalisation strategies implemented in social media advertising. Nevertheless, the respondents in our study acknowledge children's vulnerability to advertising. This might explain why they would inform children about contemporary advertising techniques already from the age of 9-10 years onwards, while they perceive children capable of understanding and comprehending these formats only from the age of 12-13 onwards. Especially for the most subtle and implicit advertising formats, such as advergames and video advertising, advertisers do not find that informing youngsters about the commercial and persuasive intent behind these messages is a necessity. This is a remarkable result as the highly integrated nature of these advertising formats make it more difficult to identify and recognise these formats as advertising. Despite the omnipresence of contemporary advertising's data collection practices, the respondents acknowledge the need for ethical data collection and privacy policies. Practitioners showed an approval for a combination of both legislation and self-regulation initiatives to regulate advertising aimed at children.

RQ 4: Which parental mediation strategies do parents use to mediate their children's media use and advertising exposure, and what are their perceptions towards the ethical appropriateness of contemporary advertising formats?

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Parental mediation strategies are specifically implemented on media devices that parents are most familiar with, such as television. This is in line with previous research (Newman & Oates, 2014; Spiteri Cornish, 2014). The more mobile a media device is, the less parental strategies are used to mediate children's media use on these devices. Mobile media devices have a smaller screen size, are more used on an individual level, which makes it more difficult to implement parental mediation on these devices (Sonck et al., 2013). Restrictive mediation is the most often used parental mediation strategy to both young children and teenagers. This finding is in line with the study of Hudders and Cauberghe (2018). Restrictive mediation can be considered as the most easiest form of parental mediation as no further explanation needs to be given. However, research has shown that restrictive parental mediation is less effective in helping children understand the persuasive and commercial intent of advertising (Buijzen, 2014). Moreover, in the context of integrated advertising formats (e.g. brand placement, in-game advertising and advergames) restricting advertising exposure also means that the media experience itself cannot be consumed (Buijzen, 2014). Discussing advertising techniques, as a form of active mediation, is hardly used. This mediation strategy requires that parents put more effort in mediation and that parents have more advertising knowledge (Nelson et al., 2017). However, the study of Naderer, Matthes, Marquart, and Mayrhofer (2018) also shows that parental mediation strategies for contemporary, integrated advertising formats are less effective than for traditional ones, as integrated advertising format are more difficult to recognise. Indeed, the study of Hudders and Cauberghe (2018) shows that both restrictive and active mediation increases (instead of decreases) the brand attitude of young children (7-8 years). They suggest that parental mediation strategies should focus on situational advertising literacy in order to improve children's knowledge about the advertising strategies used at the moment of the exposure. To date, mediation strategies are more focussed on improving dispositional advertising literacy. Children's age, the gender and the educational background of the parents are determining factors in the use of parental mediation. Parents mediate especially young children's (6-12 years) media use and advertising exposure, while parental mediation strategies are less implemented toward teenagers (13-18 years). Parents consider younger children as more susceptible as their cognitive skills have not matured and fully developed, and acknowledge that younger children need help in identifying and understanding the persuasive and commercial intent of advertising (Lee, 2012; Ogenhaffen et al., 2012). Lower educated parents mediate less compared to parents with a higher educational level. Higher educated parents might be more concerned about potential (negative) ad effects compared to less educated parents (Valkenburg et al., 1999). Mothers apply more parental mediation strategies than fathers, as

was also found in previous research (Clark, 2011; Nathanson, 2001; Nikken & Jansz, 2014; Sonck et al., 2013). Parents appear to hold more or less the same perceptions as advertisers concerning the ethical appropriateness of contemporary advertising formats and youngsters' advertising knowledge (12 years as turning point). Also parents would inform children from the age of 10 years onwards. The only difference is that parents' perceptions are somewhat stricter compared to those of advertising practitioners.

RQ 5: Which are the best media contexts to reach youngsters to spread an awareness campaign on advertising literacy, and which elements should be included in this campaigns to generate positive results?

The exploratory study on the components of awareness campaigns to advance the advertising literacy in children and young teenagers shows how these target groups are exposed to advertising formats on a daily basis. The findings show that only traditional advertising formats are recognised and that the persuasive attempt of these traditional advertising formats is clear, whereas this is not the case for integrated and interactive online advertising formats. The ability to identify and comprehend advertising is slightly better for teenagers. However, in general, the more integrated or the more interactive the advertising formats are, the more challenging this is. The results show that the choice for the specific medium or media by which an advertising literacy awareness campaign is spread should be considered carefully. Children between 9 and 10 years old should be approached in a different manner than young teenagers of 12 and 13 years old. These age groups correspond to different stages in consumer socialization (analytical stage between 7 and 11 years, and reflective stage from 11 years onwards) (John, 1999). Children and teenagers emphasize that they absolutely do not like it when media content on their favourite media channel (e.g. a YouTube video) is interrupted by a campaign or a commercial message. This corresponds to the findings that children and teenagers try to avoid advertising as they perceive it as irritating (Apestaartjaren, 2016). Further, in the development of awareness campaigns, it is important to approach youngsters belonging to different age groups differently. For example, younger children are more in favour of a cartoon figure as a spokesperson, while older teenagers prefer a human. Both age groups are best approached by means of a humorous appeal built around a specific story. Nevertheless, the execution should be adjusted to the specific type of humour preferred by the target group (e.g. slap stick humour for children, while this type of humour might be perceived as childish by teenagers). The development of an awareness campaign faces the challenge of how to break through the ad clutter to get enough attention. Schools were seen as the ideal location to spread an awareness

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campaign on advertising literacy, as youngsters can be easily reached there, there is less advertising clutter and a link with educational packages can be established, which could strengthen the campaign's message. As the media landscape and the interests of children and teenagers change fast, it is recommended to take into account the popularity of particular media when planning to launch a campaign. While Facebook was the most popular social medium for youngsters a few years ago, this has changed to Instagram (Apestaartjaren, 2016, 2018).

Table 7.1: Overview answers to specific research questions per chapter

Research questions	Answer
<p>Chapter 2</p> <p>RQ 1: What are the effects of the integration of brand information and brand interactivity in advertising stimuli on brand-related information memory, brand attitude, and the sharing of personal information in young teenagers?</p>	<p>Integration</p> <ul style="list-style-type: none"> - Lowers memory effect of brand information - No effect found on brand attitude - No effect found on the sharing of personal information <p>Interactivity</p> <ul style="list-style-type: none"> - Enhances memory effect of brand information - Has a positive effect on brand attitude - No effect found on the sharing of personal information
<p>Chapter 2</p> <p>RQ 2: How can the effects of integration and interactivity on the sharing of personal information be explained by awareness of selling intent, critical processing and brand attitude?</p>	<p>Integration</p> <ul style="list-style-type: none"> - No effect found of integration on awareness of selling intent - Serial mediation model for integration stops at the first step <p>Interactivity</p> <ul style="list-style-type: none"> - Has a positive effect on awareness of selling intent - Awareness of selling intent has a negative effect on critical processing - Critical processing has a negative effect on brand attitude - Brand attitude has a positive effect on personal data sharing <p>⇒ Fully mediated three serial mediation model:</p> <p style="text-align: center;"> + - - </p> <p>Interactivity → aware ness of selling intent → critical processing → brand attitude → personal data sharing</p> <p style="text-align: center;">+</p>

<p>Chapter 3</p> <p>What is the effect of personalised advertising on youngsters' awareness of selling intent and word-of-mouth intention, and what is the moderating role of youngsters' age and an advertising cue?</p>	<p>Awareness of selling intent</p> <ul style="list-style-type: none"> - Higher for personalised advertising compared to non-personalised advertising - Higher in 7th graders than in 5th graders <p>Word-of-mouth intention</p> <ul style="list-style-type: none"> - No effect found <p>Age</p> <ul style="list-style-type: none"> - 5th graders awareness of selling intent higher for personalised ads compared to non-personalised ads - 5th graders WOM intention higher if ad is personalised compared to non-personalised ads - No difference in 7th graders awareness of selling intent and WOM intention between personalised and non-personalised ads <p>Advertising cue</p> <ul style="list-style-type: none"> - In presence of a cue, awareness of selling intent higher for personalised ads - No moderating role of cue on relation of personalisation on WOM intention <p>⇒ No interaction between cue and grade on awareness of selling intent ⇒ If cue is present, 5th graders WOM intention higher</p>
<p>Chapter 4</p> <p>RQ 1: Which new advertising formats are mostly used towards children and teenagers?</p>	<p>Children (6-12 years)</p> <ul style="list-style-type: none"> - Contests - Branded websites - Premiums <p>Teenagers (13-18 years)</p> <ul style="list-style-type: none"> - Contests - Branded websites - Banners

<p>Chapter 4</p> <p>RQ 2: According to advertising professionals, from which age onwards</p> <ul style="list-style-type: none"> (a) do minors understand the commercial intention behind new advertising formats (b) is the usage of these new advertising formats ethically acceptable, (c) should minors be made aware of the commercial intent of these marketing communication techniques? 	<p>RQ 2:</p> <ul style="list-style-type: none"> (a) 12-13 years onwards (b) 12-13 years onwards (c) 9-10 years onwards
<p>Chapter 4</p> <p>RQ 3: What are the characteristics of an ethical data collection and data protection policy aimed at minors?</p>	<ul style="list-style-type: none"> – Provide verification of the age of the children and teenagers – Allow verification of the status of the children’s and teenagers’ parents or legal guardians – Provide clear information concerning the usage of cookies and the possibility of disabling them – Prohibition on the data collection of children (6-12 years) – Children (6-12 years- should not be allowed to register on brand websites or mobile platforms without permission of their parents or legal guardians – Parents should be informed when personal data from children and teenagers is processed – Parents should give permission for the data collection of both children and teenagers
<p>Chapter 4</p> <p>RQ 4: How should advertising towards children and teenagers be regulated and how should advertising literacy be developed?</p>	<p>Regulation</p> <ul style="list-style-type: none"> – Combination of both legislation and self-regulation for advertising to children and teenagers <p>Awareness building</p> <ul style="list-style-type: none"> – Government should strive for awareness building around advertising literacy to both children and teenagers – The educational system has a duty to promote advertising literacy amongst children and teenagers

<p>Chapter 5</p> <p>RQ 1: According to parents (legal guardians), from which age onwards</p> <ul style="list-style-type: none"> (a) do youngsters understand contemporary advertising formats, (b) is the use of contemporary advertising formats towards youngsters ethically acceptable (c) should youngsters be made aware of the commercial intent of contemporary advertising formats? 	<p>RQ 1:</p> <ul style="list-style-type: none"> (a) 13 years onwards (b) 13 years onwards (c) 10 years onwards
<p>Chapter 5</p> <p>RQ 2: How many parental mediation strategies are used by parents (legal guardians) on television, personal computer or laptop used for leisure time, mobile phone and tablet?</p>	<p>Television</p> <ul style="list-style-type: none"> – Between 3 and 4 strategies for young children (6-12 years) – Between 1 and 2 for teenagers (13-18 years) <p>Personal computer/ laptop for leisure time</p> <ul style="list-style-type: none"> – Between 2 and 3 strategies for young children (6-12 years) – 1 strategy for teenagers (13-18 years) <p>Mobile phone</p> <ul style="list-style-type: none"> – 1 strategy for young children (6-12 years) – 1 strategy for teenagers (13-18 years) <p>Tablet</p> <ul style="list-style-type: none"> – Between 2 and 3 for young children (6-12 years) – Less than 1 strategy for teenagers (13-18 years)

<p>Chapter 5</p> <p>RQ 3: For how many media devices do parents (legal guardians) use mediation strategies?</p>	<p>Restrictions</p> <ul style="list-style-type: none"> - Between 2 and 3 media devices for young children (6-12 years) - On 1 media device for teenagers (13-18 years) <p>Discussing advertising in general</p> <ul style="list-style-type: none"> - Between 1 and 2 media devices for young children (6-12 years) - On 1 media device for teenagers (13-18 years) <p>Discussing advertising techniques</p> <ul style="list-style-type: none"> - Between 1 and 2 media devices for young children (6-12 years) - Less than 1 media device for teenagers (13-18 years) <p>Discussing advertising intent</p> <ul style="list-style-type: none"> - Between 1 and 2 media devices for young children (6-12 years) - On 1 media device for teenagers (13-18 years) <p>Co-viewing</p> <ul style="list-style-type: none"> - Between 1 and 2 media devices for young children (6-12 years) - On 1 media device for teenagers (13-18 years)
<p>Chapter 5</p> <p>RQ 4: Is the perception of advertising's appropriateness and the use of parental mediation strategies influenced by</p> <ul style="list-style-type: none"> (a) the age of the child(ren), (a) the gender of the parent (legal guardian) (b) the educational level of the parent (legal guardian)? 	<ul style="list-style-type: none"> (a) More strategies implemented on media devices and more media devices mediated by young children (6-12 years) compared to teenagers (13-18 years) (b) Mothers mediated more compared to fathers (c) Higher educated parents implement more strategies and mediate more media devices compared to less educated parents

<p>Chapter 6</p> <p>RQ1: In terms of reach and preference, which are the best media contexts to reach 9 and 10-year-old children and 12 and 13-year-old teenagers to spread an awareness campaign on advertising literacy?</p>	<p>9 and 10-year-old children</p> <ul style="list-style-type: none"> – Television – Outdoor media (billboards) – YouTube – Do not disturb game play with pop-ups <p>12 and 13-year old teenagers</p> <ul style="list-style-type: none"> – Social media (YouTube, Facebook) – Mobile devices – Television – Do not disturb their game play with pop-ups
<p>Chapter 6</p> <p>RQ2: How should media, spokespersons, appeals and concrete messages be implemented in awareness campaigns to generate positive attention of 9 and 10-year-old children and 12 and 13-year-old teenagers?</p>	<p>9 and 10-year-old children</p> <ul style="list-style-type: none"> – Media: television, YouTube (video bloggers), smartphone – Spokespersons: cartoon figure, male character – Appeals: slapstick humour (slips of the tongue), playful atmosphere, colourful, visual – Concrete message: short message, jingles, music, rhymes <p>12 and 13-year old teenagers</p> <ul style="list-style-type: none"> – Media: YouTube, school environment – Spokespersons: real person, male character, create a narrative around the world of teenagers – Appeals: humour, not too childish – Concrete message: short message, English as a language (perceived as cool), music, jingles

2 Implications

2.1 Implications for theory

As mentioned in the introduction and throughout the chapters, theoretical models and frameworks related to the effect of advertising on children and teenagers such as children's information processing (Roedder, 1981), the Persuasion Knowledge Model (Friestad & Wright, 1994) and Consumer Socialisation Theory (John, 1999) have been developed 20 to 30 years ago. In the meantime advertising strategies and advertising formats have changed drastically, leading to hidden (integrated), or entertaining and fun (interactive) advertising messages that might hamper or postpone advertising literacy in youngsters (Blades et al., 2014; Hudders et al., 2017). Chapter 2 shows that especially interactivity is an effective advertising characteristic, as it enhances memory of brand information and results in positive brand attitude and positive behaviour to the advertiser's advantage. While respondents may be aware of selling intent of a brand-interactive advertising format, this awareness does not result in critical processing of the message, but rather in accepting the brand presence better. Coping with an advertising message does thus not necessarily mean that the receiver of the message will process the information critically. The Persuasion Knowledge Models does indeed not predict that 'coping' will result in a negative reaction (Friestad & Wright, 1994). The results of chapter 3 show that personalisation as an advertising strategy results in a higher awareness of selling intent in 5th graders, but at the same time leads to a positive effect on their word-of-mouth intention. An advertising cue has a positive effect on WOM intention of 5th graders, while, although not significant, has a negative effect on 7th graders' WOM intention. Teenagers in the 7th grade might thus still be 'cued processors', while children in the 5th grade might not even have reached this stage, and can thus still be considered as 'limited processors'.

The results of chapter 2 and chapter 3 thus show that contemporary advertising features such as interactivity and personalisation trigger awareness of selling intent, but that this awareness of the underlying commercial intent does not result in critical processing and resistance against the commercial intent and the advertised brand. On the contrary, it leads to the opposite, and enhances perceptions of the appropriateness of brands in media content and reinforcement of the advertising effects (behavioural intentions and actual behaviour). Given the focus of contemporary advertising research on critical processing as a consequence of the activation of awareness of selling intent (Boerman et al., 2012, 2014; Evans & Park, 2015), this might seem

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a surprising result. However, it is important to keep in mind that the Persuasion Knowledge Model does not necessarily predict a negative reaction or a negative way of coping with a persuasive attempt. This means that in an advertising context a person can just accept the message as it is. As proposed by Evans and Park (2015), awareness of selling intent does not always result in scepticism. Indeed, the study in chapter 2 shows that awareness of selling intent might be the result of positive feelings associated with the environment or stimuli the ad is integrated in (e.g. a game). This feelings may in turn transfer to the ad or the advertised brand (Affect Transfer Mechanism) as a spill-over effect, resulting in increased persuasion (Evans & Park, 2015; Hang & Auty, 2011; Rifon et al., 2014). Previous research among adults also did not find a link between awareness of selling intent and critical processing either (Avramova et al., 2018).

The findings of the two experimental studies thus point out that, although the basic premises of the traditional persuasion knowledge model and consumer socialisation theories may still be valid (persuasion knowledge and advertising literacy develop gradually and lead to increasing critical processing), these models are mainly relevant for traditional advertising (e.g. television advertising). Both the traditional persuasion knowledge assumptions and the boundaries of the classification of the developmental stages in consumer socialisation theory should be adapted and extended to contemporary advertising's characteristics and target groups to fully grasp the development of advertising literacy and the effects of persuasion knowledge. More specifically, it is recommended to strive to a format-specific update of the model wherein for each specific advertising format the different stages of consumers-socialization are given with the corresponding age boundaries. In order to establish such an update, additional research is needed.

The age of twelve years might no longer be considered as the final stage of advertising literacy development, but persuasion knowledge continues to improve throughout adolescence (Evans & Park, 2015; Hudders et al., 2017; Panic et al., 2013; Verhellen et al., 2014; Zarouali, Verdoodt, et al., 2018). Despite this finding, both advertising professionals and advertisers seem to rely on traditional frameworks as they perceive that children younger than twelve should be protected against the effects of both traditional and online contemporary advertising, while they do not consider advertising as a problem when aimed at teenagers, irrespective of how the commercial message is presented (integrated and/or interactive and/or personalised) (see chapter 4 and chapter 5). Chapters 2 and 3 show that online contemporary advertising are certainly persuasive and difficult to comprehend by young teenagers. Moreover, the recent

study of Zarouali, Verdoodt, et al. (2018) shows that adolescents' level of persuasion knowledge only reaches that of young adults at age 16, and even at that age adolescents are not consciously aware of data collection purposes of advertising and how they can be implemented in future advertising campaigns. Therefore children younger than 12 but also children older than 12 should be protected and informed about contemporary advertising formats.

Based on advertisers' perceptions investigated in chapter 4, it seems that advertising practitioners conform to legislation and ethical codes imposed by self-regulatory initiatives (e.g. The Belgian Pledge). These legal and self-regulatory initiatives take twelve years as a crucial age to delineate from which age onwards it is considered ethical and appropriate to advertise with any advertising tactic available. Advertising aimed at children under the age of twelve is considered unethical, whereas commercials initiatives targeted at teenagers are not considered problematic, as it is a widespread assumption that from the age of twelve, individuals have sufficient cognitions and knowledge to comprehend advertising in all its shapes and forms. Advertisers thus mainly adhere to both legal and self-regulatory principles only. The only way advertising practitioners go beyond this legislation and self-regulation principle is that they support the idea that children should be informed at an early stage about how advertising works ('consumer sovereignty'). Additionally, they express the necessity for strict and ethical data collection and protection policies and encourage educational initiatives and programmes in schools to enhance children's advertising knowledge ('caveat venditor' principle).

Chapter 5 investigated the implementation of three parental mediation strategies traditionally distinguished in academic literature namely: restrictive mediation, active mediation and co-viewing (Nathanson, 2001; Sonck et al., 2013; Valkenburg et al., 1999). With the widespread availability and use of mobile media, the parental mediation context has drastically changed. Parents mediate far less for mobile media devices than they do on traditional ones. Moreover, they do seem to primarily rely on restrictive mediation, and far less actively discuss advertising techniques with their children. Parents' use of restrictive mediation was also found in recent research concerning mediation of advertising (Hudders & Cauberghe, 2018). The traditional framework on parental mediation might need to be updated to be more relevant and applicable to the mediation of contemporary advertising exposure on mobile media devices. This implication was also suggested by Naderer et al. (2018) and Hudders and Cauberghe (2018). However, if parents should mediate these advertising formats, they should be able to recognise these formats and be aware how these advertising formats work. Therefore it is recommended

to engage in active mediation for integrated advertising formats as the exposure to the commercial message and the media context happens simultaneously (Naderer et al., 2018).

The last contribution is not so much theoretical but methodological. In chapter 6, we applied the principles of co-creation and a design sciences approach as a method to develop the components of an advertising literacy awareness campaign targeted at children and teenagers, combining the insights from youngsters and advertising professionals. Techniques such as brainstorming, the customer journey approach, and serious games were used to co-create the building blocks of effective awareness campaigns. The results of this study can be used to develop different blueprints and concepts of awareness campaigns on advertising literacy targeted at children and teenagers. These may subsequently be tested by means of experiments among the target groups to find out which executions of awareness campaigns are most effective.

2.2 Implications for advertisers

As mentioned in the theoretical implications section, we found that awareness of selling intent does not necessarily lead to negative outcomes, but might result in positive evaluations and behavioural intentions and responses. Therefore it is recommended that advertisers communicate clearly the underlying intentions of their message. Moreover, advertisers who are honest in showing what their true intentions are, might be perceived fair or trustworthy (De Pauw, De Wolf, Hudders, & Cauberghe, 2017). Children who notice an advertising cue might thus also positively evaluate the advertiser. As a consequence, it might be expected that advertisers who make their intentions clear will be perceived as ethical actors who take the vulnerability of their target groups into account, and who act according to principles of fairness and consumer sovereignty. If advertisers want to take up their responsibility in this debate, they should show their willingness to implement an advertising cue that is easy to recognise by children. Such a cue was developed and tested by De Jans et al. (2018).

Advertising professionals' opinions concerning the use of online contemporary advertising formats are inspired by research on traditional advertising formats. However, integrated, interactive and personalised advertising formats do have a persuasive impact on youngsters. In order to protect this target group from unconscious persuasion, existing (self-)regulatory rules, guidelines and principles should be more strict. Advertisers themselves are in control of self-regulating guidelines. They acknowledge that, compared to adults, children have more

difficulties with recognising advertising. Consequently, they should broaden and extend the existing guidelines to go beyond the measures that were taken in light of traditional advertising. They should take their responsibility and establish regulations that take youngsters' vulnerability into account. Especially concerning data collection and data protection policy, advertisers should apply stricter guidelines. Here again the implementation of a transparent, clear advertising cue that is easy to recognise and of which the meaning is easy to comprehend by children is recommended (De Jans et al., 2018).

Advertisers' perceptions (chapter 4) are based on their experiences with traditional advertising, while current online advertising formats have been shown to have a profound effect on youngsters and contemporary advertising features pose a challenge for youngsters to identify these advertising formats and how they work. Public policy should thus stress and inform advertisers and marketers about the impact online advertising formats have on children. Research shows that contemporary advertising formats are still difficult to understand by children (Panic et al., 2013). It might be that advertisers still underestimate the impact and the effects of these advertising formats on children and teenagers. Furthermore, as described in the fourth chapter, advertising professionals acknowledged that they target young children (younger than 12). This means that these advertisers do not adhere to the existing (self-)regulating initiatives such as the Belgian Pledge (The Belgian Pledge, 2017). Both regulation and (self-)regulation should be aware of and inform the advertising industry about the advertising effects aimed at youngsters and should question and evaluate their own practices with a critical mind set on ethical appropriateness and fairness. Additional legislation can be developed about the basic principles of advertising stating, for instance, that advertising towards children and teenagers should be accompanied by an advertising cue that is easy recognisable. However, laws are not easily adapted when changes are needed. As a result it is not possible to regulate all aspects of advertising by legislation. Self-regulation should translate laws in codes of conduct and operational practices, for instance what the size of an advertising cue should be in different contexts and what colours should be used ensure that the advertising cue is easily recognisable by the target group. Awareness might be raised among advertisers by communicating the findings of academic research to them and stressing the importance of taking up their responsibility by striving for transparency and implementing a clear and easy to recognise advertising cue.

Awareness campaigns aimed at parents and children should use an integrated marketing communications strategy and use both offline media (outdoor media, television media) and

online media channels (e.g. vlogs, YouTube videos or social media to reach teenagers' attention). Moreover, a link between such awareness campaigns and educational packages with a focus on advertising literacy can be established (Hudders et al., 2016; Nelson, 2016). The school environment can then function as a channel to spread the campaign. Advertising professionals themselves can contribute actively to the development of awareness campaigns and educational packages. They can do this by sharing their insights and knowledge in the development of educational material and by communication openly about the techniques and strategies they use.

2.3 Implications for public policy

Children and teenagers are susceptible to the persuasive effects of advertising (Blades et al., 2014; Owen et al., 2014; Rozendaal, Buijzen, et al., 2011; van Reijmersdal et al., 2012). The results from chapter 2 and 3 indeed show that contemporary advertising formats have a strong impact on youngsters' cognitive, evaluative and behavioural responses, even after a very short exposure to the advertising stimulus. The younger the children are, the more susceptible they are to these persuasive effects. In general, awareness of selling intent and critical processing of advertising messages are relatively low, even in young teenagers who are traditionally assumed to have reached an adult level of understanding. As a result there is a need for public policy to take measures to make youngsters aware of and protect them against the negative effects of subtle advertising formats.

Children's persuasion knowledge and advertising literacy can be improved by developing educational advertising literacy lessons in school. These educational packages could consist of both informational approaches and exercises that learn how children could reflect critically about advertising (Nelson, 2016). Stakeholders, such as teachers, parents, youth workers, consumer organisations, and the advertising industry should be informed and educated about the effects of contemporary advertising, both on themselves and on youngsters, as well. Indeed, as the results of chapter 5 show, parents mediate especially on media they are familiar with and apply parental mediation strategies to young children (6-12 years) in particular, while teenagers' media use is less mediated. It thus appears that parents are more concerned about young children's vulnerability to online media and online advertising. It might be possible that parents do not implement parental mediation to media or advertising they are not familiar with, because they feel rather insecure about their own knowledge of these practices (Nelson et al., 2017). Therefore it is important to provide information and education about these novel

advertising formats to parents as well. Especially the group of less educated parents should be reached by these initiatives as our study found that this group uses less mediation and if they do so, they apply more restrictive mediation instead of instructive mediation, the mediation type most associated with instructive education about media and advertising effects. The same holds for single-parents household with a father as head of the family, as results point out that fathers provide less guidance to their children's media use and advertising exposure compared to mothers.

Awareness on the topic of contemporary online advertising formats and strategies can be raised by informing various stakeholder groups involved with the topic (i.e. consumer organisations, youth workers, teachers and parents, advertisers), by means of lectures, advertising literacy training sessions, information sessions or workshops. The insights generated to develop awareness campaigns on the topic of advertising literacy (chapter 6) can be used for this. We acknowledge that it is utopia to reach all these stakeholders by these initiatives. However, the recommendations given provide an overview of what could be done.

3 Future research

Young teenagers' actual data sharing behaviour was investigated in the first chapter. Even though data collection and tracking activities are common in advertising practices aimed at both children and teenagers (Cai & Zhao, 2010, 2013; Neyens & Smits, 2017), the actual data sharing behaviour of children has received only scant attention in literature, and, despite its importance, remains an under-researched variable in advertising literature. Future research can fill this gap and might investigate other (e.g. privacy-related) factors that are at play when youngsters decide to disclose personal data to a persuasive agent by focusing on personality traits such as risk aversion and privacy concerns. Attention should be given to perceived social pressure from friends or peers, as this was identified as one of the most important predicting factors of youngsters' intention to share personal data with advertisers in exchange for a gift (Heirman et al., 2013).

Interactivity was found to lead to positive cognitive, attitudinal and conative ad responses and enhanced awareness of selling intent. However, no effect was found of the integration of brand information in media content on the awareness of selling intent. Future research should investigate this further.

Chapter 7: Conclusions

Participants in the two experimental studies in chapters 2 and 3 were exposed only once to the advertising stimulus. In a real-life situation an individual might be exposed several times to an advertisement, and some online contemporary advertising formats are especially designed for repeated exposure (e.g. advergames and in-game advertising). Future research should investigate which effects advertising might have on youngsters' persuasion knowledge and their ad responses if they are exposed repeatedly to the same commercial stimuli. Would the effects be reinforced, or would repeated exposure result in enhanced retrieval of advertising knowledge and eventually lead to negative ad responses? A replication of the studies in a real-life context could reveal the answer.

Due to technological limitations, the study in chapter 3 exposed participants to a static News Feed on Facebook. The external validity of this study could be enhanced if the respondents were exposed to an actual interactive social networking site which could track their actual behavioural responses (e.g. actual clicks or real eWOM). Obviously, other social networking sites (e.g. Instagram, Snapchat, Pinterest) could be investigated in advertising research aimed at youngsters, as it is possible that, although Facebook was the most used social networking sites amongst Flemish teenagers in 2016 (Apestaartjaren, 2016), the popularity of social media among both children and teenagers has changed.

De Jans et al. (2018) developed and tested an advertising cue that is understandable by children to identify embedded and online advertising. The effects of such a cue should be tested further in several advertising contexts, as the language used in cues can lead to different interpretations of the message (Evans et al., 2017). Future studies should thus investigate and compare the comprehensibility of the existing advertising disclosures on social media ('sponsored content') and websites (e.g. 'advertisement' or adv') with potentially more effective advertising cues. Regulators should be aware, that although social media are only legal to use from the age of thirteen, younger children are active on these platforms as well.

Advertisers' often invent new online advertising formats and advertising strategies. Some of these recent advertising formats are not included in the studies within this dissertation. For instance, nowadays *influencer marketing* is considered as the next big thing (De Veirman, Cauberghe, & Hudders, 2017; Evans et al., 2017). Influencer marketing is defined as '*a tactic by which a brand/agency/publisher works with individuals, so called influencers, to drive brand messages to meet strategic goals (Interactive Advertising Bureau (IAB), 2018 p. 5)*'. Influencers are '*individuals that can range from being celebrities to more micro-targeted professional or*

non-professional “peers” (e.g. the difference between a blogger with a large following vs. an individual with a small following, but high influence amongst a set peer group) (Interactive Advertising Bureau (IAB), 2018 p. 5). Influencers may function as an aspirational reference group. Messages spread by influencers might be perceived as less intrusive and very persuasive, as it is not always clear that these influencers are endorsing a product or a brand and the influencers’ endorsements are masqueraded as non-paid, non-commercial content (Evans et al., 2017). Future research could investigate the effects these influencer messages have on youngsters as the latter may admire the former, but might not be aware of the commercial intent behind their messages. The same goes for ‘vloggers’ (video bloggers) who might not be perceived as persuasive agents as they are often just regarded as peers. Future studies should try to keep pace with these new trends.

Both the study on advertisers’ (chapter 4) and parents’ perceptions (chapter 5) used vignettes as descriptions of online integrated and/or interactive advertising formats. These descriptions were limited in the information they provide, and in a real-life situation it is possible that certain situational circumstances might have an effect on the respondents’ answers. In the advertisers study this was covered by conducting additional follow-up interviews that provided more nuanced insights. Future research could use qualitative in-depth interviews to also obtain a more refined view on parental mediation. Additionally, these interviews could explore the underlying reasons why parents use or do not use specific mediation strategies. Interviews could try to define other potential mediation techniques that parents perceive as feasible and effective to mediate their children’s and teenagers’ media use on mobile devices. In order to get the whole parental mediation picture, research could study what children and teenagers themselves think about the guidance and mediation strategies used by their parents, and could confront youngsters’ opinions with those of their parents. As it can be expected that parental mediation and the strategies used and the frequency depends on parents’ advertising literacy, research could investigate how parents’ advertising knowledge affects their mediation.

In chapter 6, the building blocks of effective advertising literacy campaigns targeted at children and teenagers were explored. Based on these insights, specific awareness campaigns should be developed and their effectiveness should be formally tested.

This dissertation focused on the effects of advertising features in commercial messages. However, these features might be used for social-profit communication campaigns too. For example, instead of looking into commercial advergames, the effects of integrated and

Chapter 7: Conclusions

interactive elements in serious games (entertaining educational games that are used as an awareness tool (Bellotti, Kapralos, Lee, Moreno-Ger, & Berta, 2013; De Jans, Van Geit, Cauberghe, Hudders, & De Veirman, 2017)) that might be used for education purposes could also be studied.

In four chapters of the dissertation (chapter 3, 4, 5 and 6), age was included as a factor by comparing two different age groups. Chapter 4 and 5 made a distinction between young children (6-12 years) and teenagers (13–18 years) while chapter 3 and 6 compared children in elementary school (10-12 years) with teenagers in the 7th grade (first year of secondary education in Belgium). Although there were both theoretical (children's cognitive development) and practical reasons for this division (practical execution of the survey aimed at advertising professionals and parents), it should be acknowledged that children within the same age range in the studies, may differ substantially in their cognitive development and responses. A 6-year old child differs from a 9-year old child, and a 13-year old differs from a 16-year old. Future research should use a more fine-grained age distinction to delve deeper into children's and teenagers' cognitive development and to gain a more nuanced picture of contemporary advertising effects on youngsters. The same holds for parents' and advertisers' perceptions regarding the ethical fairness and data and privacy protection and regulations policies.

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Dutch summary

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Onder invloed van de digitalisering onderging het medialandschap de voorbij decennia belangrijke veranderingen. De manier van adverteren veranderde mee. Vandaag is reclame aanwezig op alle denkbare media, zowel offline, online als mobiel. Omdat adverteerders zich bewust zijn van het feit dat veel mensen reclame proberen te vermijden hebben ze zich toegelegd op nieuwe strategieën om ervoor te zorgen dat de reclame het beoogde doelpubliek toch kan bereiken. Online reclamevormen worden gekenmerkt door integratie, interactiviteit en personalisatie.

Het integreren van reclame is het inbedden van commerciële boodschappen in media-inhoud die als primaire doelstelling heeft om informerend of entertainend te zijn. Een voorbeeld hiervan is het integreren van reclame in spelletjes. Interactiviteit van een reclameboodschap is de mogelijkheid van de ontvanger van de boodschap om met de boodschap en het merk dat deze boodschap uitstuurt in interactie te kunnen treden. Dit kan bijvoorbeeld door op de reclameboodschap te klikken en vervolgens doorgestuurd te worden naar de website van de adverteerder waar de ontvanger meer informatie over het product te zien krijgt en het mogelijk is om het product te kopen. Deze interactie zorgt er dus voor dat de wisselwerking tussen zender en ontvanger van de boodschap verder gaat dan enkel en alleen maar passieve blootstelling aan de reclameboodschap. Een derde doel van online reclame is vaak dat deze tracht om persoonlijke gegevens van de doelgroep en de ontvanger te verkrijgen. Dat kan bijvoorbeeld door de ontvanger van de boodschap te vragen om zich te registreren op een website en in ruil hiervoor extra voordelen te verkrijgen (bv. toegang tot extra inhoud op de website, een korting, kans te maken op een leuke prijs enz.). Adverteerders kunnen deze persoonlijke gegevens dan gebruiken om toekomstige reclameboodschappen te personaliseren, d.w.z. aanpassen aan de kenmerken, voorkeuren en noden van de ontvanger, of kunnen deze gegevens zelf verder doorverkopen aan andere bedrijven.

Deze hedendaagse reclamekenmerken roepen vragen op omtrent het gemakkelijk herkennen van de commerciële bedoelingen. Verder worden er vaak vragen gesteld bij verzamelen van deze persoonlijke gegevens, wie hier toegang tot heeft en waarvoor deze gegevens gebruikt worden. Deze bekommernissen worden enkel maar groter wanneer kinderen en tieners de doelgroepen van deze reclame zijn. Adverteerders richten zich steeds meer op kinderen en tieners. Zij zijn immers de consumenten van morgen, zijn gemakkelijker te beïnvloeden dan

volwassenen en zijn erg actief op online media waarin deze reclame vervat zit. Kinderen en tieners zijn vatbaarder voor reclame aangezien hun cognitieve vaardigheden nog niet volledig ontwikkeld zijn. Als gevolg hiervan hebben ze het moeilijker om geïntegreerde en interactieve reclame te herkennen en het doel achter deze reclamevormen te begrijpen. Dat roept volgende vragen op: wat is het effect van deze reclamevormen op kinderen en tieners? Zijn ze zich bewust dat het om reclame gaat, begrijpen ze dat het reclame is hoe verwerken ze deze boodschappen en reageren ze ten aanzien van deze boodschappen? Is het wel ethisch verantwoord om deze reclame naar deze doelgroepen te gebruiken? Hoe kunnen we kinderen informeren over deze manier van reclamemaken zodat ze kritische consumenten kunnen worden die het daadwerkelijke doel achter deze reclame begrijpen?

Het doel van dit proefschrift is om de effecten van hedendaagse reclamevormen op kinderen en tieners te onderzoeken in vijf verschillende empirische studies en vanuit het perspectief van drie belangrijke actoren. Enerzijds worden kinderen en tieners als doelgroepen van reclame zelf bestudeerd. Daarnaast worden de percepties en het gedrag belicht van adverteerders, die een hoofdrol spelen in dit debat, en van ouders, die een erg belangrijke rol spelen in de opvoeding en media- en reclame-educatie bij hun kinderen. Bijkomstig worden de inzichten van jongeren zelf en van professionals die dagelijks in contact komen met kinderen en tieners of die werken voor deze doelgroepen, gebundeld om input te geven voor verdere bewustmaking, voorlichting en educatie omtrent deze nieuwe reclamevormen zodat kinderen en tieners goed geïnformeerde en kritische consumenten kunnen worden. De probleemstelling van dit proefschrift wordt bestudeerd door gebruik te maken van verschillende onderzoeksmethoden. Experimenten, vragenlijsten, diepte-interviews en co-creatie workshops worden gecombineerd om verschillende kanten van het onderwerp te bestuderen.

De eerste studie onderzoekt het effect van integratie en interactiviteit als twee kenmerken van hedendaagse online reclamevormen op het onthouden van productinformatie, merkherkenning, merkattitude en het delen van persoonlijke gegevens bij 576 jonge tieners uit het 1^{ste} en 2^{de} middelbaar. De studie bestond uit een 2 (integratie versus geen integratie) X 2 (interactiviteit versus geen interactiviteit) experiment. Dit resulteerde in vier verschillende geteste reclamevormen: een advergaming, in-game advertising, een interactieve banner en een niet-interactieve banner. De resultaten tonen aan dat interactiviteit een positief effect heeft op merkherkenning en het onthouden van productinformatie. Een interactieve reclamestimulus zorgt ook voor een positievere merkattitude. Het integreren van reclame in media-inhoud heeft een negatief effect op merkherkenning en zorgt ervoor dat er minder productinformatie

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onthouden blijft. Er werd geen effect gevonden van integratie op merkattitude. Een niet-geïntegreerde, interactieve reclameboodschap zorgt dus voor de beste geheugeneffecten en de meest positieve merkattitude. Er werd geen direct effect van interactiviteit en integratie gevonden op het delen van persoonlijke gegevens. Interactiviteit heeft wel een positief effect op het bewustzijn van de verkoopintentie en dit bewustzijn van de verkoopintentie heeft op zijn beurt een negatief effect op de kritische verwerking. Kritische verwerking heeft een negatief effect op merkattitude en merkattitude heeft een positief effect op het delen van persoonlijke gegevens. Er werden geen soortgelijke effect gevonden voor reclame-integratie. Opmerkelijk is dat het bewustzijn van de verkoopintentie leidt tot het ‘gepast’ vinden van reclame, en niet tot een grotere kritische kijk ertegenover.

Het tweede empirisch hoofdstuk onderzoekt bij 167 jonge tieners het effect van personalisatie van reclame op Facebook op het bewustzijn van de verkoopintentie die schuil gaat achter de boodschap en de intentie tot mond-tot-mond reclame door middel van een experiment waar 3 factoren gemanipuleerd werden: personalisatie versus geen personalisatie, leeftijd (10- tot 11-jarigen uit het 5^{de} leerjaar versus 12- tot 13-jarigen uit het 1^{ste} middelbaar) en aan- / afwezigheid van een reclamelabel. Bewustzijn van de verkoopintentie is hoger bij tieners uit het 1^{ste} middelbaar dan bij kinderen uit het 5^{de} leerjaar. Personalisatie van reclame zorgt ervoor dat het bewustzijn van de verkoopintentie hoger is. Er werden geen effecten gevonden op de intentie tot mond-tot-mond reclame. Het bewustzijn van de verkoopintentie en intentie tot mond-tot-mond reclame is hoger bij kinderen uit het 5^{de} leerjaar indien de reclame gepersonaliseerd is vergeleken met niet-gepersonaliseerde reclame. Er werden geen verschillen gevonden tussen gepersonaliseerde en niet-gepersonaliseerde reclame bij leerlingen uit het 1^{ste} middelbaar. Aanwezigheid van een reclamelabel zorgt voor een hoger bewustzijn van verkoopintentie, maar enkel maar indien de reclame gepersonaliseerd is. Indien er een reclamelabel aanwezig is dan is de intentie tot mond-tot-mond reclame groter bij kinderen uit het 5^{de} leerjaar. Dit suggereert dat zelfs indien er een reclamelabel aanwezig is, dit niet altijd leidt tot een negatieve reactie. Mogelijk zijn kinderen uit het 5^{de} leerjaar nog niet in de fase van ‘cued processors’ zoals de traditionele *consumer socialization theory* poneert, en wanneer het gaat om online reclamevormen.

Het derde empirisch hoofdstuk neemt de percepties van 90 adverteerders en mensen die werkzaam zijn in de reclamesector - hoofdrolspelers in het debat omtrent reclame gericht naar kinderen en tieners - onder de loep via een online bevraging waarbij 9 reclamevormen beschreven worden in vignettes. De volgende reclamevormen werden onderzocht: product

placement op televisie, in-game advertising, advergames, merchandising, location based services, search engine marketing, applicaties als reclame, online behavioral advertising en videoreclame. Er werd nagegaan vanaf welke leeftijd adverteerders kinderen (6-12 jaar) en tieners (13-18 jaar) in staat achten om verschillende reclamevormen te begrijpen, vanaf welke leeftijd het gebruik van deze reclamevormen naar deze doelgroepen toe ethisch verantwoord is en vanaf welke leeftijd deze doelgroepen geïnformeerd moeten worden over de persuasieve intentie die achter deze reclameboodschappen schuil gaat. Er werd ook bevraagd hoe een goed beleid van gegevensverzameling en gegevensbescherming en privacy er moet uitzien. De adverteerders werden ook gevraagd of reclame gericht naar kinderen en tieners eerder onderwerp moet uitmaken van wetgeving of van zelfregulering door de reclamesector, en ook in welke mate de overheid en het onderwijs een rol moeten spelen. De resultaten van deze bevraging werden vervolgens verder besproken in 10 diepte-interviews met adverteerders die werkzaam zijn voor bedrijven die zich naar kinderen en tieners richten. De resultaten tonen aan dat adverteerders van mening zijn dat vanaf de leeftijd van 12 à 13 jaar kinderen in staat zijn om huidige reclamevormen te begrijpen. Vanaf diezelfde leeftijd wordt het gebruik van deze reclamevormen naar deze doelgroepen toe ook als ethisch verantwoord beschouwd. Opvallend is dat de deelnemers aan deze studie van mening zijn dat kinderen vanaf een leeftijd van 9 à 10 jaar reeds geïnformeerd zouden moeten worden over de persuasieve intentie achter deze reclameboodschappen. Een goed beleid van gegevensverzameling en gegevensbescherming moet voorzien in het op de hoogte brengen van de ouder dat de gegevens van kinderen of tieners verzameld worden en ouderlijke toestemming voorafgaand aan het delen van deze informatie. Adverteerders zijn van mening dat reclame gericht naar kinderen en tieners gereguleerd dient te worden via een combinatie van zowel wetgeving als zelfregulering. De overheid dient in te zetten op bewustmaking omtrent dit onderwerp en het onderwijs dient zijn steentje bij te dragen door het behandelen van dit thema in lessenpakketten.

Het vierder empirisch hoofdstuk focust op een andere belangrijke groep, namelijk de ouders of wettelijke vertegenwoordigers van de kinderen. Via een online vragenlijst bij 340 ouders (200 met jonge kinderen tussen 6 en 12 jaar en 140 met tieners tussen 13 en 18 jaar) werden de percepties van de ouders bevraagd over reclame gericht naar kinderen en tieners en het gebruik van ouderlijke mediatiestrategieën om het mediagebruik en de daarbij horende blootstelling aan reclame te onderzoeken. De percepties werden ook hier bevraagd door middel van 9 vignettes die een beschrijving geven van reclamevormen. Er werd nagegaan vanaf welke leeftijd ouders kinderen en tieners in staat achten om reclamevormen te begrijpen, vanaf welke leeftijd het

gebruik van deze reclamevormen naar deze doelgroepen toe als ethisch verantwoord wordt beschouwd en vanaf welke leeftijd kinderen en tieners geïnformeerd dienen te worden over het persuasieve karakter van deze reclameboodschappen. Bovendien werden de ouders ook bevraagd over het gebruik van vijf ouderlijke mediatiestrategieën (beperkingen opleggen, het bespreken van reclame in het algemeen, het bespreken van de gebruikte reclametechnieken, het bespreken van de reclame-intenties, en het samen bekijken van de media-inhoud) op vier verschillende mediatoestellen, namelijk televisie, het gebruik van computer of laptop tijdens de vrije tijd, de smartphone en de tablet. Deze studie bekeek ook of er verschillen zijn in ouderlijke mediatie naargelang de leeftijd van het kind, en het geslacht en opleidingsniveau van de ouder of wettelijke vertegenwoordiger. Deze studie toont aan dat ouders min of meer dezelfde traditionele kijk op de huidige online reclamevormen hebben als adverteerders. Ouders achten kinderen in staat om de verschillende reclamevormen te begrijpen vanaf een leeftijd van 13 jaar. Vanaf 13 jaar wordt het gebruik van deze reclamevormen naar kinderen en tieners ook als ethisch verantwoord beschouwd. Ouders zouden kinderen informeren over de commerciële en persuasieve intentie achter van deze reclamevormen vanaf de leeftijd van 10 jaar. Het opleggen van beperkingen is de meest gebruikte mediatechniek naar kinderen en tieners toe. Bespreken van reclametechnieken is de minst gebruikte ouderlijke mediastrategie bij zowel kinderen als tieners. Televisie is het medium dat het meest gemedieerd wordt bij kinderen en tieners. Des te mobieler het mediatoestel wordt, des te minder ouderlijke mediastrategieën er gebruikt worden. Het gebruiken van mediatiestrategieën neemt af naarmate het kind ouder wordt. Het mediagebruik en de blootstelling aan reclame van tieners wordt minder gemedieerd dan dat van kinderen. Moeders en hoogopgeleide ouders mediëren meer dan vaders en lagere opgeleide ouders.

Het vijfde empirisch hoofdstuk is exploratief van aard en gaat met behulp van co-creatie workshops bij zowel kinderen, tieners als professionals die werken voor en met kinderen na uit welke elementen (medium, personage, sfeer van de campagne en de concrete boodschap) een bewustmakingscampagne omtrent reclamewijsheid moet bestaan, en via welke media-contexten 9- tot 10- jarige kinderen en 12- tot 13-jarige tieners het best bereikt kunnen worden in een dergelijke bewustmakingscampagne. In totaal werden er 9 workshops georganiseerd, 4 workshops met kinderen, 4 workshops met tieners en 1 workshop met professionelen. De conclusie is dat de verschillende leeftijdsgroepen op een andere manier benaderd moeten worden. Kinderen komen nog vaak in contact met traditionele mediakanalen zoals televisie en outdoor media (reclameborden, posters, etc.). YouTube is een belangrijk medium waar ze

voornamelijk filmpjes van vloggers bekijken. De kinderen hebben een voorkeur voor een mannelijk, cartoonachtig figuur in reclame, en verkiezen een humoristisch sfeerbeeld. Professionals voegen hieraan toe dat bij kinderen van de leeftijdsgroep 9- tot 10-jaar slapstick humor, versprekingen en plagerigere humor werkt. Kinderen hebben een voorkeur voor een korte, visuele, kleurrijke boodschap die samen kan gaan met rijmpjes en een ludieke deuntjes. Bij tieners valt het belang van sociale media in hun leefwereld erg op. Bij deze leeftijdsgroep zijn vloggers ook nog steeds erg populair. Tieners verkiezen een persoon van vlees en bloed in reclame en hebben een voorkeur voor een jongen. Professionals merken op dat het aangewezen is om een iets ouders leeftijdsgenoot als personage in de campagne te gebruiken aangezien tieners vaak opkijken naar personen die een paar jaar ouder zijn dan zichzelf. Tieners willen een humoristisch campagnebeeld, maar het is erg belangrijk dat de gebruikte humor niet als kinderachtig wordt beschouwd door deze doelgroep. Een korte boodschap wordt hier ook weer aanbevolen, liefst met een Engelse slogan. Zowel kinderen als tieners benadrukken dat ze het als zeer vervelend ervaren wanneer ze tijdens het spelen van spelletjes onderbroken worden door pop-ups. Vandaar is het aanbevolen om geen pop-ups in games te gebruiken voor bewustmakingscampagnes.

De inzichten uit dit proefschrift hebben ook implicaties voor theorie, praktijk en het beleid. De theoretische inzichten situeren zich op het bijschaven en heroriënteren van bestaande en vaak gebruikte theorieën omtrent reclame gericht naar kinderen en tieners en onderzoek rond reclamewijsheid. Op basis van de resultaten uit de studies is het aangewezen om de traditionele drie verschillende fases die voor verschillende reclamevormen in het algemeen worden gebruikt te herzien zodat voor elke reclamevorm specifiek wordt aangegeven vanaf welke leeftijd welk stadium in reclamewijsheid zich ontwikkelt. Op die manier kan rekening worden gehouden met de specifieke kenmerken van elk reclameformat op de ontwikkeling van reclamewijsheid bij kinderen en tieners. Als kinderen of tieners al reclame herkennen, dan is het gevolg daarvan vaak niet dat ze er kritischer tegenover staan. Het traditionele *Persuasion Knowledge Model* dient dan ook te worden verfijnd en aangepast aan de specifieke reacties van kinderen en tieners. Ouders mediëren het mediagebruik des te minder naarmate dit gebruik plaatsvindt op mobiele toestellen. Bovendien praten ouders erg weinig met hun kinderen over hedendaagse reclamevormen. Theorieën van ouderlijke mediatie moeten worden verfijnd om tot een nieuwe typering van ouderlijke mediatie strategieën te komen die aangepast zijn aan nieuwe media en mobiele dragers en aan hedendaagse reclametechnieken.

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Adverteerders hebben nog steeds een traditioneel beeld van de invloed van reclame op kinderen en tieners en dit beeld lijkt ingegeven door onderzoek dat betrekking heeft op traditionele televisiereclame. Bovendien zouden ze in het kader van zelfregulering een pro-actievere rol moeten spelen om meer te doen dan enkel het strikt noodzakelijke. Bovendien kan de reclame-industrie zijn steentje bijdragen door zijn schouders te zetten onder bewustmakingscampagnes en input te geven voor het ontwikkelen van lesmateriaal en educatieve pakketten om kinderen en tieners reclamewijs te maken. Het implementeren van een duidelijk zichtbaar reclamelabel dat makkelijk te herkennen is voor kinderen en tieners is ook noodzakelijk om transparant en betrouwbaar beschouwd te worden.

Aangezien kinderen en tieners erg kwetsbaar blijken te zijn voor de effecten van de huidige online reclamevormen, zou het beleid ook de nodige stappen kunnen ondernemen om te bewerkstelligen dat kinderen en tieners reclamewijzer worden, zoals het ontwikkelen en verspreiden van bewustmakingscampagnes en het implementeren en gebruiken van educatieve pakketten over reclamewijsheid. Workshops die gegeven kunnen worden aan verschillende stakeholdergroepen zoals consumentenorganisaties, jeugdwerkers, ouders en leerkrachten behoren ook tot de mogelijkheden.