

Children as recipients of marketing communication on the Internet

MAŁGORZATA BUDZANOWSKA-DRZEWIECKA¹

The Jagiellonian University in Kraków, Institute of Economics, Finance and Management

Abstract

Due to the ease of access to the Internet, children more often become the recipients of the content placed therein. They are a specific group of Internet users due to their development conditions, which in contact with persuasive content, often not directly addressed to them, raises doubt. The importance of development conditions was often analysed in relation to the understanding and the child's response to the content placed in traditional media. The development of the advertising market makes it necessary to update knowledge in this area. The study is an attempt to systematize the issues raised in the literature regarding the reception of online marketing communication by children (under 12 years of age). The literature review helped to identify the basic principles of construction of selected communication activities (e.g. websites dedicated to children), including competence development of children. Moreover, the attention was paid to the problems that may occur in the reception of persuasive messages on the Internet by children, including in the context of the model of knowledge about persuasion.

Paper type: review article

Keywords: advertising literacy, children, marketing communication, marketing addressed to children, online marketing, persuasive knowledge, website design

¹ m.budzanowska-drzewiecka@uj.edu.pl, Researcher ID: I-1184-2015.

Introduction

The popularity of the Internet meant that a specific group that seeks and enjoys access to its contents – while at the same time is more often in the limelight of marketers – are children. Their generation was born in the digital world, the consequence of which is – among other things – they spend a lot of time using the Internet, which is reflected in referring to them as the Net Generation (Tapscott, 1998), Digital Natives (Spink, Danby, Mallan, & Butler, 2010) or the Alfa Generation² (McCrinkle & Wolfinger, 2009).

Children, while browsing the Internet, meet diverse content – including marketing messages, which are often directed to other groups. What is also more frequent is the development of persuasive messages for this audience (Davis, 2002), especially in high-income countries. This results from, on the one hand, the growing purchasing power of children and their participation in family purchases (Budzanowska-Drzewiecka, 2011). On the other hand, the attention of enterprises on children is not surprising in light of the results of research showing that they are one of the groups commonly using the Internet. According to the study by Nielsen (2010), previous experience in the use of the Internet is the best predictor of children's behaviour on the Web.

The development of technology, including the technology available on the Internet, has changed the way companies communicate with customers, expanding the range of activities and making them more and more sophisticated. The Internet forces companies to construct communication activities, not only on the basis of outbound but primarily inbound marketing, which may cause difficulty in accurate identification of persuasive messages in recipients. This is especially important in the case of children who due to the determinants of development do not have fully developed competencies to enable them to understand the persuasive intent of advertisers – which can arouse controversy, both in parents and among the representatives of consumer organizations, researchers and businesses.

Harding with the team (2009) emphasize that the issues raised in the discussion, which has been going on since the beginning of the twenty-first century and which relates to the behaviour of children on the Internet, refer primarily to the (often negative) effect of the use of computers and the Internet on the lives of young people and their (physical and mental) development and the generation gap between them and adults. In most cases, these studies focused on the potential use of ICT in education, less often having a typical market context. This indicates the need to organize knowledge about children as recipients of marketing activities on the Internet as a basis for further research and implementation in practice in a way that takes into account the ethical aspects of the problem.

² People born between 1995 and 2010 are defined as the Z Generation, children born after 2010 are the Alfa Generation.

The author's review of the concepts and results of research in this paper aims to highlight the most important issues – requiring further empirical verification – relating to children (below 12 years of age) as recipients of online marketing communication. The study focused primarily on highlighting the development conditions of the group of recipients which should be taken into account when planning activities on the Internet, not only by those companies that are targeting children. Considerations concern the forms of Internet communication with which children can possibly have frequent contact, such as, websites or advertising games available on the Internet. These forms are often used by companies carrying out operations in the area of marketing communication. In addition, children are involved in interactions with them. They actively look for content on websites. Similarly, in the case of advergaming – regardless of its form – in contrast to the passive reception of the advertising content, children actively interact with advergaming (Lascu, Manrai, Manrai, & Brookman Amissah, 2013).

The literature review sought to take into account the multiplicity of perspectives (marketing, educational and psychological) presenting reflections on the knowledge about persuasion in children, their expectations of websites (user experience) resulting from the development conditions and their characteristic way of using search engines (as a consequence of competences relating to the search of information).

1. The specificity of marketing communication on the Internet addressed to children

The excess of information reaching customers through different media and forms of marketing communications is one of the factors of drawing the attention of enterprises on new media (Tarczydło, 2015) thanks to which Internet marketing develops. It is defined as the process of building and maintaining relationships with customers based on online activities to facilitate the exchange of ideas, products and services in a manner satisfactory to the sender and recipient (Ngai, 2003). One of its forms is inbound marketing, the essence of which are the activities letting the potential recipient easily find the sender of the advertising message and information needed thanks to creating, publishing and positioning of unique and interesting content (Tarczydło, 2015). The strategy is based on two-way communication model and commitment of both sides, and requires the use of – among other things – search engine optimization (SEO), social media activities and content marketing.

The effectiveness of marketing communication (including the Internet) requires that the sender adjusts the medium (its specific features), forms of communication (tools that can be used in medium) and message (selection of content and method of construction) to the recipient (its characteristics, needs and

competences). The development of new technologies, increasing the scope of activities within the marketing communications, causes greater variation in the ways of communicating with different target groups (Proszowska, 2010), one of which – due to the specific conditions of development – are children.

Children in recent years increasingly use available media (Verhellen, Oates, De Pelsmacker, & Dens, 2014), the consequence of which is contact with more advertising messages reaching them through various channels and forms. However, this is not tantamount to them having sufficient competencies allowing for critical evaluation of the information encountered. For example, older children (aged 9–13 years) are able to recognize advertising in the form of graphic banners but do not regard links to shops, logos of advertising sponsors or native ads as advertising message (*Dzieci w sieci*, 2012).

Marketing communication directed at children is not more misleading or persuasive per se. However, in the case of children, there is a greater risk of being misled by marketing communications than for adults (Verhellen et al., 2014) and, therefore, reaching out to the children's segment is a difficult, ethically responsible and complex task, not only in the case of communication on the Internet. The basis for these actions is to establish relationships which require the understanding of child recipients. In addition, on the Internet the personalization of actions is often possible thanks to the acquisition of personal data and monitoring the behaviour of children (Davis, 2002) – and then adjusting the message to their experiences and development opportunities.

The range of communication activities directed at children is extensive. Companies try to gain their attention through a variety of offline (e.g. various forms of advertising, product placement and in-school marketing) and online activities (e.g. on websites, viral marketing, advergaming) (Figure 1). They use creative methods to engage children. For example, they offer entertainment and prizes as part of diversified interactions on the Internet. The scope of these activities is different for different cultural markets, due to legal requirements relating to advertising addressed at children both on the Internet and beyond (Lascu et al., 2013).

Due to the fact that there are differences between the Internet and, for example, television, the impact of their messages on the recipient may vary. As Nairn and Dew (2007) say, the impact of online advertising is of a long and continuous nature as opposed to TV commercials, which are short, and children have occasional contact with them. It not without significance that the Internet as a medium allows for creating interactive formats (that engage customers to a larger extent) as well as viral marketing or advergaming. Another difference emphasized by researchers is in the time required to make a purchase after contact with an advertising message, which in the case of activities on the Internet is definitely reduced (Nairn & Dew, 2007).

The characteristics of the Internet as a medium make the acquisition of children's attention on the Web different from the activities carried out in the traditional

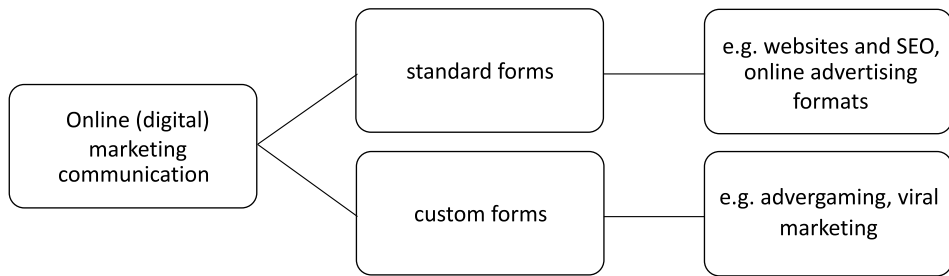


Figure 1. *Examples of online activities directed at children by companies.*

media. However, despite the existence of the extensive literature on the understanding of advertising (primarily television) by children, what needs more attention is the reception (acquisition and interpretation) of marketing communications on the Internet by children. The issue that is undertaken more and more often is the children's ability to search for information on the Internet (Bilal, 2000, 2005; Bilal & Kirby, 2002; Foss, 2004; Foss, Druin, Brewer, Lo, Sanchez, & Golub, 2012; Jochmann-Mannak, Huibers, Lentz, & Sanders, 2010; Jochmann-Mannak, Lentz, Huibers, & Sanders, 2012; Large, Beheshti, & Rahman, 2002), which seems to be important for the design of websites dedicated to children and their optimization.

Easier access to the Internet has led to the creation of dedicated children websites, most of which contain marketing messages.³ Nairn and Dew (2007) reviewed the advertising practices on selected websites, popular among children in the UK aged 9–11 years. They noticed that most of the content is not directly aimed at children, which means ads also do not apply to products dedicated to them. This, together with the development of interactive forms of online advertising, can raise concerns about their persuasive impact on young audiences. Researchers have noticed – among other things – that half of the communication activities on websites was not clearly marked as the activities of a persuasive nature (i.e. advergames).

The issue of Internet advertising is wide and requires distinguishing online ad formats from other practices, such as advertiser-controlled sites (e.g. advertising games on a brand website) or advertising located on non-advertisers' sites as a message within the context of other material, such as banner advertisements (Martínez, Jarlbro, & Sandberg, 2013).

Martínez et al. (2013) conducted a qualitative study among Swedish children to gain insight into their views and practices regarding advertising on the Internet. According to the results of these studies, children can be categorized into two groups

³ Neuborne (in Nairn & Dew, 2007) estimated that only 2% of websites do not contain any advertising content.

with a different attitude towards online advertising: ambivalent and negative. Children with an ambivalent view said that advertising on the Internet can be both irritating and entertaining. They claimed that they pay attention to advertisements, which are considered funny, interesting or relevant to them. However, children with a negative attitude to ads try to avoid them and are annoyed by them, but are struggling to cope with advertisements due to their frequent appearance, colour and motion.

The statements of children concerning avoidance of ads are unsatisfactory evidence of the lack of efficacy of advertising messages addressed to that group. Modern forms of advertising are directed to children particularly likely to implicitly persuade (Nairn & Fine, 2008). Therefore, relying only on the conclusions resulting from the conscious processing of information is inadequate and requires reference to the model of knowledge about persuasion. Even if both viewing ads and playing advertising games have entertainment value for children, then the way of processing their content varies (Lascu et al., 2013). Therefore, what is more and more often analysed are the children's responses to unconventional communication activities (e.g. advergaming), mainly in the context of the ability to identify the advertising nature of these activities.

2. Marketing communication targeted at children via websites

The planning and implementation of marketing programs dedicated to children – not only on the Internet – requires knowledge of developmental conditions (e.g. cognitive or psychosocial) enabling to understand the behaviour and preferences of the audience. The problem may be the insufficient dexterity of children (e.g. operation of the mouse when using websites or online games), lack of skills of logical and abstract thinking (e.g. as hindering the understanding of the contents of websites, the mechanism of the game), lack of reading skills or low attractiveness of the content placed on the Internet the assessment of which depends on the age of the young consumer (Baumgarten, 2003).

Using technology (e.g. computers or mobile devices) requires the involvement of several cognitive processes: perception, attention, memory, information processing and decision making (Gelderblom & Kotzé, 2008). Gelderblom and Kotzé (2008) focused on the child – computer relationship and cognitive development of children aged 5–8 years, showing a two-way interaction. Interactions with a computer can improve the cognitive skills of children, but, on the other hand, excessive use of computers can deprive children of another kind of social interaction (Gelderblom & Kotzé, 2008). Similarly, Baumgarten (2003) argues that long and unsupervised use of the Internet by children may lead to lowering their creativity, motivation, and even weight loss. However, properly developed websites can have a positive impact and give a chance to improve different skills in children (pro-

social, collaboration, knowledge). At the same time, in order to achieve this effect, knowledge concerning the impact of marketing messages in traditional media on children should be updated with regard to the specific nature of electronic media. Moreover, despite the fact that this issue is taken by researchers, it is still not resolved to what extent to modify the existing principles of creation of content on websites (Harding, Szakacs, & Parry, 2009) in the case of adult recipients. This is still a valid and important area of research that requires taking into account the development conditions of children.

Human cognitive development is defined as a process wherein there is adjustment, expanding and reorganising of mental structures (e.g. Piaget, Vygotsky), but the explanation of the method depends on the particular theory (Gelderblom & Kotzé, 2008). For example, according to the theory by Piaget, the development of cognitive structures is the learning condition of an individual. In contrast, Vygotsky emphasized that learning leads to the development of cognitive structures, seeing cognitive development as depending on the context and external factors.

One of the most frequently cited approaches is the concept of Piaget who proposed an age-stage model of childhood cognitive and social development in which the child's mental and interactive capacities evolve in a linear fashion through a set of biologically predetermined stages: sensorimotor, age 0–2; pre-operational, age 2–7; concrete operational, age 7–11; and formal operational, age 11 onwards (Table 1).

Table 1 *Characteristics of the way of thinking of children in accordance with the concept of intellectual development by Piaget*

Age of child	Stage	Selected characteristics of children's thinking
2–7 years	pre-operational	specific – imaginative thinking transductive thinking (from detail to detail) centration – focus on one issue egocentrism – difficulty understanding other perspectives animism – assigning personality, soul and life to inanimate objects inability of transformation belief that fiction is the same as reality
7–11 years	concrete operations concrete operational	verbal and logical thinking inductive reasoning (from the whole to the part) decentration – understanding the perspectives of others reversibility of mental operations the ability to categorize

Source: own elaboration based on Baumgarten, 2003; Przetacznik-Gierowska & Makiello-Jarza, 1992.

The concepts of cognitive development were reflected in the literature on consumer behaviours which are also analysed in the context of consumer socialization theory (Valkenburg & Cantor, 2001), formulated for the first time by Ward

(1974). Consumer socialization is seen as a rather effortless process by which children learn the skills, knowledge, and attitudes necessary to function as consumers (Ward, 1974). Roedder John (1999), reviewing the literature on consumer socialization, proposed a three-stage process through which young consumers acquire market competences. Based – among other things – on the theory by Piaget, she distinguished: the perceptual stage (age 3–7), the analytical stage (age 7–11) and the reflective stage (age 11–16) (Roedder John, 1999). According to this approach, only children of 7–11 years of age are able to develop the competence to understand persuasive intent of advertisers.

Despite the growing interest in children as recipients of marketing activities on the Internet, the knowledge about how children use the web and, therefore, how they should be designed for this audience, is insufficient. Incorrect assumptions, to which McNeal (1992) drew attention, underlying the planning of marketing activities targeted at children also occur in the case of designing websites. It is often based on beliefs of adults about what children prefer and what does not cause any major difficulties to them (Jochmann-Mannak et al., 2012) and how children should behave (Nielsen, 2010) and results only from the observation of their own children, rather than earlier analyses.

One of the most frequently cited studies providing a basis for designing websites for children (ages 3–12⁴) indicates the developed skills relating to the search on the Internet in older children (over 6 years of age), while revealing all sorts of problems for the younger ones (Nielsen, 2010). This demonstrates the need to treat children in the narrow age groups as distinct target groups with specific requirements, including at least the division into: young (3–5), mid-range (6–8) and older (9–12) children (Nielsen, 2010).

The cited study was carried out in two stages, with an interval of nine years. The comparison shows that the majority of the aspects of user usability of websites has not changed during this period, especially those that are related to developmental constraints of customers (e.g. the menu structure) rather than technological development (i.e. the possibility of using video forms). The results showed, however, that older children have more experience in the use of computers and the Internet than 9 years ago, which limits the number of potential problems, such as, the speed of navigation (only the youngest kids have problems with scrolling). Behaviours that previously were characteristic of the age group of 6–8 years, in the second test appeared in younger children (3–5).

Another change concerned the observed tendency to read (e.g. getting acquainted with the instructions before starting the game). Currently, the behaviour of children is similar to the behaviour of adults. They do not they have a tendency to read

⁴ Observations of a broad range of children (90: 41 girls and 49 boys) as they use a wide variety of websites mainly targeted at children. Two studies were conducted (in 2001 and 2010). The first one – examined 27 sites with 55 children, aged 6–11 form in Israel and the United States. The second one – examined 29 sites with 35 children, aged 3–12 years from the United States, more see Nielsen (2010).

the instructions, which indicates the experience in the use of similar sites. However, this does not mean that one can treat children as adult users. Their requirements vary. Children need a design style that follows different usability guidelines. The selected differences in the behaviour of children and adults are shown in Table 2.

Table 2 *The selected differences in the online behaviours of adults and children*

The area of differences		Children	Adults
Developmental conditions	Tendency for patience	Immediacy of awards	Limited patience
	Reading	Not at all (youngest kids) Tentative (young kids) Scanning (older kids)	Scanning
	Physical limitations	Slow typists Poor mouse control	None
Search of information	Purpose of entering the website	Entertainment	Information, communication
	Exploratory behaviour	Trying out the many possibilities/options	Stick to main path
	Multiple/redundant navigation	Very confusing	Slightly confusing
	Search	Bigger reliance on bookmarks than search, but older kids do search	Main entry point to the Web
Planning the contents of a website	Back button	Not used (young kids) Relied on (older kids)	Relied on
	Real-life metaphors e.g., spatial navigation	Very helpful for pre-readers	Often distracting
	Scrolling	Avoid (young kids) Some (older kids)	Some
	Animation and sound	Liked	Usually disliked
	Age-targeted design	Crucial, with very fine-grained distinctions between age groups	Unimportant for most sites (except to accommodate seniors)
Reactions to promotional activities	Advertising and promotions	Problems with distinguishing from real content	Ads avoided (banner blindness) promos viewed sceptically

Source: own elaboration based on Nielsen, 2010.

When designing websites (not just those of a marketing nature) what is important for children is their friendliness. Those of them who experience problems in the use of a particular website quickly leave it. They also react negatively to the content aimed at people even slightly above or below their age range.

The website directed to children should meet their educational and entertainment needs (Large et al., 2002; Baumgarten, 2003; Nielsen, 2010; Jochmann-Mannak et al., 2012).

What is attractive for preschool children are those activities that provide fun and stimulation (e.g. mastering new skills like learning letters or colour names), especially when they have the opportunity to demonstrate their achievements in front of others (parents, guardians) (Baumgarten, 2003; Nielsen, 2010). However, one should be aware of the restrictions in the use of the Internet due to their psychophysical development, especially the lack of sufficient technical competences, manual skills or short attention span. Therefore, the content and method of transmission must be characterized by simplicity and ease of operation. The mechanism (e.g. advertising games) should be based on simple manual tasks, and feedback should be immediate and easily accessible.

School children also pay attention to the content that allows them to build self-esteem through positive reinforcement. Growing physical, cognitive and psychosocial competencies allow wider use of the Internet. Because of the experience in using the Internet, they often already have sufficient motor skills. Reading skills allow for understanding commands in the form of words (instructions or elements of games like filling the gaps by entering words) and written feedback. During this period what also increases is their memory capacity, which allows the use of, for example, matching skills in games. With the ability to think logically it is also possible to offer them games based on mathematical rules (including more advanced scoring rules) (Baumgarten, 2003). However, regardless of how much time they spend on the Internet (which is the best predictor of how they use web sites) (Nielsen, 2010), children still do not understand the commercial nature of advertising content.

Due to the lack of reading skills in preschool children – when reaching out to them – it is worth relying on visual communication: signs and images that should be unambiguous and in contrast to one another (in bright palette). The used visual interfaces or icons should not be the representation of icons used in communication with adults due to their difficulty in understanding children. This problem was indicated by Uden and Dix (2000) who conducted research on the creation of content dedicated to children of 5–6 years of age. Researchers emphasize that the design of search tools for children is not easy, because it requires the understanding of the mental models of children and adjusting it to the conceptual model. The fact that children have frequent contact with modern technology means that they expect interactive and animated interfaces. As it is apparent from the cited studies, children like animations. Moreover, they recognize the functions and significance of animated icons. At the same time, they get bored quickly and show a lack of interest if the interface offers limited paths of interaction. In contrast, when there are different forms of interaction (e.g. animation when hovering over the icon), children spend more time on searching, engaging and learning fast (Uden & Dix, 2000).

It should be emphasized that the possibilities of using visualization and icons depend on the knowledge of the recipient (often children do not have enough resources to accurately associate the icon with the physical thing they represent) and cultural context, which is often overlooked in studies (Uden & Dix, 2000). For example, cultural differences in the formulation of the message on the websites of food companies dedicated to children in the three countries were analyzed by Lascu with the team (2013). The aim of the study was to determine how socio-cultural and political-legal differences in the three countries (Spain, the USA and France) interact with the content of websites of food companies aiming their marketing activities at children. The results showed that the websites of French food companies highlighted nutrition-related and interaction-related features when compared to the content on the websites of American and Spanish food companies. In contrast, the creators of websites of American and Spanish food companies put greater emphasis on games-related, rewards-related, attributes-related, and brand-related features, compared to the websites of French food companies (Lascu et al., 2013).

3. The specificity of searching for information on the Internet by children

Another issue connected with communication via websites is the use of search engines by children. The results of research in this area allow for formulating implications not only for marketing specialists but also for web developers and educators (as it is an important element in school education). The search for information by children is connected with several barriers, such as, problems with reading and writing, less efficiency in searching using keywords and difficulties in formulating queries (Foss et al., 2012).

When analysing the content searched for on the Internet by children, researchers focused on: the method and effectiveness of search (Spink et al., 2010; Jochmann-Mannak et al., 2010), the perception of search engines when searching for information (Gossen, Höbel, & Nürnberger, 2014), and the principles of web design (Gossen, Nitsche, & Andreas, 2012) and search systems for children (Gossen & Nürnberger, 2013).

Studies on the use of search engines by children and adults show that both groups of users have cognitive difficulties in constructing queries enabling effective information search on the Internet (Bilal & Kirby, 2002), and in the behaviour of these groups there are significant differences. The results (Spink et al., 2010) show that children engage in complex search on the Internet, including searching and browsing content based on keywords, actively formulating questions, assessing the relevance of search results. However, the specificity of their stage of cognitive development also has its consequences in the way of interacting with websites, or

scanning their content, finding them based on keywords and browsing (Jochmann-Mannak et al., 2012).

Bilal (2000) pointed out that most of the children find content based on keywords, but achieve better results in finding information by browsing websites. Children reactively search for information, without planning or having a strategy for searching for information (Jochmann-Mannak et al., 2010). Their search is dependent on the task structure. The number of searches based on keywords in the case of specifically defined tasks was higher, although researchers noted that children performed poorly on the well-defined tasks. This may be due to the fact that children still have not developed competencies needed for planning search but which are not necessary for browsing for information in ill-defined tasks (Jochmann-Mannak et al., 2010).

Based on the observations by Brown and De Loach (1978) on the cognitive development of children, Jochmann-Mannak with the team (2012) point out that they may have a problem with controlling and coordinating the scanning of content available on websites. The older the child, the more likely they are to focus on the important characteristics and ignore the irrelevant ones (Jochmann-Mannak et al., 2012). Younger children are more focused on the stimuli reaching them, not on the content of the task, which means that a lot of visual messages available on the website will distract the attention of children. Browsing is easier for children, although its effects are better when the task is more clearly defined – which is the result of the inability of abstract thinking in children.

Ease of distraction also has consequences for search because children – especially the younger ones – can forget about its purpose and, hence, they need clear guidance. With age, strategies for searching the Internet in children become more systematic and effective (Jochmann-Mannak et al., 2012). At the same, children may have trouble searching through keywords due to the insufficient knowledge resources (e.g. knowledge of a limited number of words, spelling problems, fewer associations) and memory. In addition, children tend to use keywords that have been indicated to them (e.g. as part of further explanation of the task) and they rarely use synonyms (Vanderschantz & Zealand, 2014).

It is worth noting that children and adults use different strategies when searching for information on the Internet (Gossen et al., 2014). Adult behaviours are described in the search strategy resembling letter F (F-shaped strategy). It is based on scanning the first three search results and reformulating the query if expectations concerning the information have not been met. On the other hand – as shown by the results of eye-tracking research – children in a disordered way scan by far the greater part of search results, not only on the first page. They change the query only after reaching the second page (Gossen et al., 2014). In addition, children rarely use the meta description available and have a tendency for information search while the searches performed by adults are of a navigational nature – they look for opportunities to get direct access to a specific web page (landing page).

However, ways of performing searches by children are varied. For example, Foss with the team (2012)⁵ identified seven roles corresponding to the patterns displayed by children when interacting with the Google search engine, such as, Developing Searchers, Domain-specific Searchers, Power Searchers, Nonmotivated Searchers, Distracted Searchers, Rule-bound Searchers, and Visual Searchers.

In the discussion on the search for information, the important issue is how many children require search engines dedicated to them (Bilal, 2000; Gossen et al., 2012). Some of them, such as Yahoo!igans! are not available any more, which may result in part from the fact that the effectiveness of the search for information by the children on the dedicated websites is comparable to those in Google (Jochmann-Mannak et al., 2010).

4. Reception of marketing messages by children in the context of the knowledge about persuasion

Researchers emphasize that the development of new media and the emergence of non-standard forms of communication made it necessary to verify the knowledge about the reception of advertising content by children (e.g. Buijzen, Van Reijmersdal, & Owen, 2010; Montgomery, Chester, Grier, & Dorfman, 2012; Martínez et al., 2013). What is relevant are the questions about whether children are able to recognize and understand the marketing message placed on the Internet and whether they are able to defend themselves against its impact?

Understanding persuasive messages (marketing messages) is seen by researchers as a process in which there are specific steps. Wright, Friestad, and Boush (2005) claim that knowledge about persuasion⁶ – and thus the ability to process and defend against persuasive messages – is acquired and developed through the process of learning and socialization (Lee, Choi, Quilliam, & Cole, 2009). Understanding the intention of marketing communication (of a persuasive nature) requires an advanced level of understanding of messages, not just the recognition of the sponsor or the source of the message, which appears in children of 7–8 years of age (Mallinckrodt & Mizerski, 2007). Therefore, children, depending on age and stage of socialization, are not always aware of the persuasive purposes of communication activities, which can lead to negative consequences (e.g. problem of obesity as a consequence of advertising activities on the food market) (Lascu et al., 2013). They perceive the advertising message uncritically as the accurate and objective

⁵ The research was qualitative in nature and was carried out among children of 7, 9 and 11 years of age.

⁶ The persuasion knowledge – realization of how, when, and why persuasion attempts are being made, shapes their attitudes and thoughts about influence agents (Wright et al., 2005).

representation of reality. With age older children better understand the persuasive purpose of advertising, which does not mean that they evaluate it critically. Even if children (7–8 years of age) are able to recognize the difference between a typical advertising message and other content, they have difficulty in defending themselves against their persuasive character (Lee et al., 2009). They respond to advertising messages in a different way than adults, assessing it emotionally and focusing on tasks, music or heroes (Lascu et al., 2013).

Children may have difficulty identifying the content of a persuasive nature on the Internet, both because they acquire the ability to identify advertising as a persuasive message when they are around 10 years of age (Moondore et al., 2009 in Lascu et al., 2013) and because of the difficulty in telling the difference between the marketing message from non-commercial content on the Internet (Mallinckrodt & Mizerski, 2007).

Until now, it was argued that both the ability to distinguish between advertising and program content, and the ability to understand the intentions of advertising in children are the result of cognitive functions related to age (Nairn & Dew, 2007). It is generally accepted that advertising literacy makes children less vulnerable to the impact of marketing messages, although the literature lacks sufficient arguments to fully accept this claim. This may be due both to the same developmental conditions (immature executive functioning and emotion regulation abilities) (Van Reijmersdal, Rozendaal, & Buijzen, 2012) and changes in ways of communicating the marketing message (the affect-based nature of the message and its non-standard forms of communication).

5. Children's reactions to the marketing content in advertising games

Children are now often recipients of custom online activities, among which advergaming – e.g. game advertising designed to promote the brand is one of the most interactive⁷ (Lee et al., 2009). Despite the frequent use of this form of marketing communication, directing it at children may be questionable, particularly due to the integration of commercial content with the plot of the game (Moore & Rideout, 2007). Researchers still not fully examined the effects of both its impact on the audience, and whether it is of a different nature than traditional forms of advertising. As is clear from the literature review, what still remains unresolved is the issue

⁷ The term “advergaming” refers to advertising games dedicated to the brand. They need to be distinguished from in-game advertising understood as the integration of the brand with the content of games based on the product/brand placement, although they are often used interchangeably by researchers.

of nature and effects of advertising to children in the new media, and advergaming is one of the activities, within the marketing communications, that causes anxiety (Nairn & Dew, 2007).

In most cases research on advergaming focused on the analysis of game content. A significantly smaller number of studies was to determine the understanding of the various forms of the commercial context of advergaming by children (An, Jin, & Park, 2014; Rozendaal, Buijzen, & Valkenburg, 2012; Mallinckrodt & Mizer-ski, 2007).

Most studies explaining the impact of advertising on children refers to television advertising (Nairn & Dew, 2007). Analyzing the differences in the impact of traditional forms of advertising (i.e. TV) and advergaming, in one study, Panic, Cauberghe and De Pelsmacker (2013) showed that in the case of television advertising persuasion knowledge drives the persuasive effects. However, in the case of advertising games, their impact is determined by their attitude to games. Highlighting the advertising nature of games does not increase their persuasiveness but only the attitude to the game becomes more negative (Panic et al., 2013).

Verhellen, Oates, De Pelsmacker, and Dens (2014) conducted an experiment examining the differences in the reactions to traditional (television advertising) and new forms of marketing communication (trailer, advergence, and their combination), taking into account how children are aware of their persuasive impact (degree of knowledge of the persuasive). Researchers have shown that children who have played games have more difficulty remembering the advertised brand than children who saw the ad on the traditional television. In the case of integrating communication activities (trailer and advergence), children who do not have the knowledge about the persuasive nature of marketing communications have a more positive attitude towards the brand, compared with those who had this knowledge (Verhellen et al., 2014).

Similar results regarding the impact of persuasive content in games (in-game advertising, brand placement) were obtained by Van Reijmersdal, Jansz, Peters, and Van Noort (2010), who have carried out an experiment among older children (11–17 years). They studied how persuasive messages integrated into the game affect cognitive, emotional and conative reactions of young audience on the brand and their attitude to the game itself. The results of the research showed that brand placement results in more favourable attitude towards the game and higher brand awareness, more positive brand image and greater propensity to purchase it. At the same time, there was an interaction between exposure to the brand placement, age, and prior brand use for behavioural intentions. It shows that the youngest girls with no previous experience with the brand were more susceptible to the effects of brand placement in comparison with the older girls (Van Reijmersdal et al., 2010).

Experiments conducted among younger respondents showed that in the case of children (7–8 years), even if they are able to recognize the persuasive nature of the game, they do not make use of the knowledge of persuasion (i.e. knowledge

of the commercial source of the game and its persuasive intent) when evaluating marketing message (Mallinckrodt & Mizerski, 2007; Van Reijmersdal et al., 2012).

Mallinckrodt and Mizerski (2007), examining children aged 5–8 years, showed that the effects of the game on the reaction to the brand are moderated by age.⁸ Among older children what was reported was a much higher preference of the brand participating in the experiment, but there were differences in intentions to request. In turn, the preferences of the children were not related to the knowledge of the persuasive nature of the game. However, the level of knowledge among the children studied was low and dependent on the age of the child (Mallinckrodt & Mizerski, 2007).

Similar results regarding the importance of knowledge about persuasion were obtained by Van Reijmersdal with the team (2012) who carried out an experiment among children between 7 and 12 years of age ($n = 105$). They revealed no association between the knowledge about the persuasive nature of games and the cognitive and emotional reactions of respondents. In contrast, differences in reactions were caused by brand prominence and involvement in the game. Brand prominence has led to an increase in recalling and brand awareness (cognitive responses), and involvement in the game resulted in a more favourable attitude toward the brand (affective reactions), which confirms the vulnerability of children to affective mechanisms induced by the game (Van Reijmersdal et al., 2012).

Not using the knowledge of persuasion when evaluating marketing communication by children, can, when citing Rozendaal, Lapierre, Van Reijmersdal, and Buijzen (2011), be referred to a method of processing persuasive messages according to the ELM model. Researchers argue that children process advertising messages under conditions of low elaboration, which explains the fact that they do not reach for knowledge resources in order to defend themselves against their impact. Therefore, they suggest that further research on the persuasive nature of marketing messages should include two dimensions of advertising literacy:⁹ advertising literacy performance and attitudinal advertising literacy (Rozendaal et al., 2011).

An with the team (2014) emphasize the role of the advertising literacy education within the meaning of the commercial nature of advergaming and persuasive impact on children. In an experiment conducted among 129 respondents of 8–9 years of age, the researchers showed that those people who have already played educational game for advertising literacy indicated the advergence as a kind of advertising, and, moreover, were the only group critical to advertising (An et al., 2014). This indicates that in order for the children in this age group to defend themselves against the persuasive impact of advergaming, they should be provided in advance with the indication of the advertising nature of the game.

⁸ Moreover, they proved the existence of dependences on gender and socio-economic characteristics.

⁹ Advertising literacy – the ability to analyze, evaluate, and create persuasive advertising messages across a variety of media.

The use of advergaming allows for building relationships that go beyond the context of sales. However, it may contribute to the distorted perception of specific product categories by children. The category, which in this context is often analyzed, is food (e.g. Lascu et al., 2013; Lee et al., 2009). Researchers emphasize that the problem can occur in the case of the promotion of unhealthy foods, especially since studies suggest that exposing a child to such stimuli causes them to feel hunger (Lascu et al., 2013).

Lee with the team (2009) undertook the analysis of advertising games promoting food brands for children, specifying their integration into the storyline of the game and the extent of their use to educate children. The results showed that advertisers use different strategies to put brand identifiers in games (Lee et al., 2009). Out of the three strategies: billboards ads in game, ads on game frame and active game components, most often – more than 67% of the analysed cases – the advertised brand was an active and integrated game component. Children actively played food games which was based primarily on the use of the brand logo, brand hero, branded products or their packaging. However, in only less than 3% of the cases examined in games there appeared educational issues, emphasizing the principles of healthy nutrition (Lee et al., 2009).

Conclusions

The development of technology, including computers and the Internet, has led to the emergence of many new forms of advertising aimed at children. Both the multiplicity of forms as well as their diversity mean that there was a need to update the knowledge necessary to clarify the effect of marketing messages on children and their determinants. In particular, as Nairn and Fine (2008) claim, the advertising message currently contains more subtle emotional associations than specific rational messages, which allows the transmission of surreptitious content. Traditionally, advertisers were interested in explicit attitude change. However, advertising that links products with positive stimuli can effect implicit attitude change, a process we refer to as implicit persuasion (Nairn & Fine, 2008). In such circumstances, what becomes evident is the need to take into account not only the classical theories of development (e.g. Piaget's theory) or reference to the theories of Roedder John. The attention of researchers analysing the impact of content posted on the Internet dedicated to children should be directed at recent and significant findings from psychology and neuroscience, which combine the age of children with the development of their cognitive sufficient resources both to identify the intention of marketing messages, and to critically evaluate them. The adoption of such perspectives would help not only in more precise planning of marketing activities, but also in their ethical evaluation.

Furthermore, in light of the research of Nielsen (2010), one should focus on analysing the reception of marketing activities on the Internet, on narrower age groups, which have different needs, skills and reactions to advertising.

Updating knowledge also results from the volatility of the same segment of young consumers. When growing up, children go subsequent narrow age ranges, which causes a qualitative change in subsegments. The speed of technological development provides different experiences for young audiences, hence the difficulty in the implementation of research results. This does not mean, however, that it is not possible to determine the general principles in the planning and design of selected marketing activities (e.g. upon creating websites). At the same time, this knowledge comes mainly from studies clarifying the search for information on the Internet by children in an educational context.

Awareness of development conditions of children allows for planning activities on the Internet that will match their qualifications and take into account their limitations (e.g. helplessness in the face of persuasive power of marketing communication).

In the case of placing content on the web, one should remember about providing entertainment, while stimulating the development of children. At the same time, it is important that persuasive messages on websites or in a search engine be highlighted, which increases the chances of identification of their advertising character, although this does not mean defence against their impact, as evidenced by the cited research findings on advergaming. Emphasis of different forms of online advertising is also due to the specific way of searching for information by children. It is reactive in nature, consisting in reviewing the content of subsequent websites. Even in the case of children using keywords, the tendency to use the words previously indicated to them shows an area in which manipulation is possible. In addition, when searching, children do not omit advertising content, which is characteristic of adult Internet users.

References

1. An, S., Jin, H.S., & Park, E.H. (2014). Children's advertising literacy for advergaming: Perception of the game as advertising. *Journal of Advertising*, 43(1), 63–72.
2. Baumgarten, M. (2003). Kids and the Internet: A developmental summary. *ACM Computers in Entertainment*, 1(1), 1–10.
3. Bilal, D. (2000). Children's use of the Yahoo!igans! Web search engine: I. Cognitive, physical, and affective behaviors on fact-based search tasks. *Journal of the American Society for Information Science*, 51(7), 646–665.
4. Bilal, D. (2005). Children's information seeking and the design of digital interfaces in the affective paradigm. *Library Trends*, 54(2), 197–208.
5. Bilal, D., & Kirby, J. (2002). Differences and similarities in information seeking: Children and adults as web users. *Information Processing & Management*, 38(5), 649–670.

6. Budzanowska-Drzewiecka, M. (2011). Social conditioning of purchasing decisions of 9–11 year-old consumers. *Journal of Customer Behaviour*, 10(2), 143–160.
7. Buijzen, M., Van Reijmersdal, E.A., & Owen, L.H. (2010). Introducing the PCMC model: An investigative framework for young people's processing of commercialized media content. *Communication Theory*, 20(4), 427–450.
8. Davis, J.J. (2002). Marketing to children online: A manager's guide to the Children's Online Privacy Protection Act. *Advanced Management Journal*, 67(4), 11–22.
9. *Dzieci w sieci: kompetencje komunikacyjne najmłodszych. Raport z badań* (2012). Gdańsk: Instytut Kultury Miejskiej.
10. Foss, E. (2004). *Internet Searching in Children and Adolescents: A Longitudinal Framework of Youth Search Roles*. Doctoral Dissertation, University of Maryland.
11. Foss, E., Druin, A., Brewer, R., Lo, P., Sanchez, L., & Golub, E. (2012). Children's search roles at home: Implications for designers, researchers, educators, and parents. *Journal of the American Society for Information Science and Technology*, 63(3), 558–573.
12. Gelderblom, H., & Kotzé, P. (2008). Designing technology for young children: What we can learn from theories of cognitive development. In *Proceedings of the 2008 Annual Research Conference of the South African Institute of Computer Scientists and Information Technologists on IT research in Developing Countries: Riding the Wave of Technology*, pp. 66–75.
13. Gossen, T., Höbel, J., & Nürnberger, A. (2014). A comparative study about children's and adults' perception of targeted web search engines. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. Toronto: ACM, pp. 1821–1824.
14. Gossen, T., Nitsche, M., & Andreas, N. (2012). Knowledge journey: A web search interface for young users. In *Proceedings of the Symposium on Human-Computer Interaction and Information Retrieval*. Cambridge: ACM.
15. Gossen, T., & Nürnberger, A. (2013). Specifics of information retrieval for young users: A survey. *Information Processing and Management*, 49(4), 739–756.
16. Harding, J., Szakacs, J., & Parry, B. (2009). Children playing and learning in an online environment: A review of previous research and an examination of six current web sites. *Young Consumers: Insight and Ideas for Responsible Marketers*, 10(1), 17–34.
17. Jochmann-Mannak, H., Huibers, T., Lentz, L., & Sanders, T. (2010). Children searching information on the Internet: Performance on children's interfaces compared to Google. In *Towards Accessible Search Systems – Workshop of the 33rd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*. Geneva, Switzerland, pp. 27–35.
18. Jochmann-Mannak, H., Lentz, L., Huibers, T., & Sanders, T. (2012). Three types of children's informational web sites: An inventory of design conventions. *Technical Communication*, 59(4), 302–303.
19. Large, A., Beheshti, J., & Rahman, T. (2002). Design criteria for children's web portals: The users speak out. *Journal of the American Society for Information Science and Technology*, 53(2), 79–94.
20. Lascu, D., Manrai, A.K., Manrai, L.A., & Brookman Amisshah, F. (2013). Online marketing of food products to children: The effects of national consumer policies in high-income countries. *Young Consumers*, 14(1), 19–40.
21. Lee, M., Choi, Y., Quilliam, E.T., & Cole, R.T. (2009). Playing with food: Content analysis of food advergames. *Journal of Consumer Affairs*, 43(1), 129–154.
22. Mallinckrodt, V., & Mizerski, D. (2007). The effects of playing an advergame on young children's perceptions, preferences, and requests. *Journal of Advertising*, 36(2), 87–100.

23. Martínez, C., Jarlbro, G., & Sandberg, H. (2013). Children's views and practices regarding online advertising. *Nordicom Review*, 34(2), 107–121.
24. McCrindle, M., & Wolfinger, E. (2009). *The ABC of XYZ: Understanding the Global Generations*. Sydney: University of New South Wales Press Ltd.
25. McNeal, J.U. (1992). *Kids as Customers*. New York: Lexington Books.
26. Montgomery, K.C., Chester, J., Grier, S.A., & Dorfman, L. (2012). The new threat of digital marketing. *Pediatric Clinics of North America*, 59(June), 659–675.
27. Moore, E.S., & Rideout, V.J. (2007). The online marketing of food to children: Is it just fun and games?. *Journal of Public Policy & Marketing*, 26(2), 202–220.
28. Nairn, A., & Dew, A. (2007). Pop-ups, pop-unders, banners and buttons: The ethics of online advertising to primary school children. *Journal of Direct, Data and Digital Marketing Practice*, 9(1), 30–46.
29. Nairn, A., & Fine, C. (2008). Who's messing with my mind? The implications of dual-process models for the ethics of advertising to children. *International Journal of Advertising*, 27(3), 447–470.
30. Ngai, E.W.T. (2003). Internet marketing research (1987–2000): A literature review and classification. *European Journal of Marketing*, 37(1/2), 24–49.
31. Nielsen, J. (2010). *Children's Websites: Usability Issues in Designing for Kids*, retrieved from <http://www.nngroup.com/articles/childrens-websites> [accessed: 30.01.2016].
32. Panic, K., Cauberghe, V., & De Pelsmacker, P. (2013). Comparing TV ads and advergames targeting children: the impact of persuasion knowledge on behavioral responses. *Journal of Advertising*, 42(2–3), 264–273.
33. Proszowska, A. (2010). Wykorzystanie nowych technologii w oddziaływaniu na rynkowe decyzje młodych konsumentów. *Studia i Prace Kolegium Zarządzania i Finansów/Szkoła Główna Handlowa*, (101), 186–192.
34. Przetacznik-Gierowska, M., & Makiełło-Jarża, G. (1992). *Psychologia rozwojowa i wychowawcza wieku dziecięcego*. Warszawa: Wydawnictwa Szkolne i Pedagogiczne.
35. Roedder John, D. (1999). Consumer socialization of children: A retrospective look at twenty five-years of research. *Journal of Consumer Research*, 26(3), 183–213.
36. Rozendaal, E., Buijzen, M., & Valkenburg, P.M. (2012). Think-aloud process superior to thought-listing in increasing children's critical processing of advertising. *Human Communication Research*, 38(2), 199–221.
37. Rozendaal, E., Lapierre, M.A., Van Reijmersdal, E., & Buijzen, M. (2011). Reconsidering advertising literacy as a defense against advertising effects. *Media Psychology*, 14(4), 333–354.
38. Spink, A.H., Danby, S.J., Mallan, K.M., & Butler, C. (2010). Exploring young children's web searching and technoliteracy. *Journal of Documentation*, 66(2), 191–206.
39. Tapscott, D. (1998). *Growing Up Digital: The Rise of the Net Generation*. New York: McGraw-Hill.
40. Tarczydło, B. (2015). Inbound Marketing w budowaniu wizerunku marki w Sieci. Studium przypadku. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania*, 2(39), 339–352.
41. Uden, L., & Dix, A. (2000). Iconic interfaces for kids on the Internet. In *Proceedings of IFIP World Computer Congress*. Beijing, pp. 279–286.
42. Valkenburg, P.M., & Cantor, J. (2001). The development of a child into a consumer. *Journal of Applied Developmental Psychology*, 22(1), 61–72.
43. Van Reijmersdal, E., Jansz, J., Peters, O., & Van Noort, G. (2010). The effects of interactive brand placements in online games on children's cognitive, affective, and conative brand responses. *Computers in Human Behavior*, 26(6), 1787–1794.

44. Van Reijmersdal, E., Rozendaal, E., & Buijzen, M. (2012). Effects of prominence, involvement, and persuasion knowledge on children's cognitive and affective responses to advergames. *Journal of Interactive Marketing*, 26(1), 33–42.
45. Vanderschantz, N., & Zealand, N. (2014). "Sometimes the Internet reads the question wrong": Children's search strategies & difficulties. In *Proceedings of the American Society for Information Science and Technology*, 51(1), 1–10.
46. Verhellen, Y., Oates, C., De Pelsmacker, P., & Dens, N. (2014). Children's responses to traditional versus hybrid advertising formats: The moderating role of persuasion knowledge. *Journal of Consumer Policy*, 37(2), 235–255.
47. Ward, S. (1974). Consumer socialization. *Journal of Consumer Research*, 1(2), 1–14.
48. Wright, P., Friestad, M., & Boush, D.M. (2005). The development of marketplace persuasion knowledge in children, adolescents, and young adults. *Journal of Public Policy & Marketing*, 24(2), 222–233.

Note about the Author

MAŁGORZATA BUDZANOWSKA-DRZEWIECKA – UJ graduate, she received PhD in the humanities (managerial specialization). Currently, she is an assistant professor in the Institute of Economics, Finance and Management, UJ. Her current research interests include: the young consumer's behaviour, consumer behaviour on the Internet, new forms of marketing communication, and the cultural differences.