Abstract

The advergames represent a new advertising concept that uses Internet technology to implement viral marketing campaigns. Despite the potential of this interactive advertising method, very few academic studies have been initiated to investigate the characteristics of advergames, and their influence on consumers’ perceptions and behaviour. This paper attempts to develop a theoretical framework which explains the effect of advergames on players’ perceptions and behaviour, and to verify its applicability, using an experimental approach. The research methodology applied combines experiment and surveys; the collected data being analysed and discussed from a quantitative point of view. The results indicate a clear relationship between the exposure to advergames and an increased consumption of the represented brands. The participants experiencing the state of flow are more inclined to increase the frequency of brand purchases, and to communicate with other people about advergames.

Keywords: advergames, state of flow, AIDA, consumer perceptions and behaviour

INTRODUCTION

Advergames have been defined as online games that incorporate marketing content (Dobrow 2004, Thomases 2001). They are interactive games that are developed around a brand, a product, or a character associated with a brand or a product. Branding and products are incorporated into the game itself through either associative or demonstrative methods – meaning that a game can be used to demonstrate the use of a product or to associate the product with an activity or a lifestyle.

The need to develop new Internet advertising tools arose from the rapid decline in the effectiveness of rich media advertising in the late 1990s (Chen and Ringel 2001, Yuan et al. 1998). The interest in advergames has substantially increased in the last 5 years, because of their perceived advantages (FreshGames 2002, WebResource 2004) which are:

- low-cost marketing in comparison with the traditional advertising channels, such as TV and radio;
- a captured audience that can transmit valuable personal information about their demographic profile, behaviour, needs, attitudes and preferences;
- customer retention: the average time spent in an advergame is 7 to 30 minutes, which cannot be achieved in the case of a classical TV advertisement; and
- viral marketing – 81% of the players will email their friends to try a good game.

The data indicates the huge potential of advergames (Rodgers 2004, Sennott 2004). It is predicted that advergaming will become a standard part of interactive advertising, as consumers become more annoyed with traditional ads. The expenditures on advertising related with online games are expected to reach 4 billion US$ by the end of 2008 (Skyworks 2007).

Despite the hype created by this new advertising method, most of the information discussing, describing or debating advergames is professionally-oriented, often written in an advertising style (3RD Sense 2007, Bannan 2002, DeCollibus 2002, D5 Games 2004a, Hartsock 2004, Intrapromote 2004, ShockOmedia 2006, Skyworks 2007). A few academic studies have also been initiated to investigate the characteristics of advergames, and their influence on consumers’ perceptions and behaviour (Buckner et al. 2002, Chen and Ringel 2001, Hernandez et al. 2004, Moore 2006, Nelson 2002, Smith 2007, Winkler and

Authors

Călin Gurău
(calin.gurau@wanadoo.fr) is Associate Professor of Marketing at GSCM – Montpellier Business School, France. His research focuses on the business development strategies of high-technology firms and on Internet marketing issues.

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Buckner 2006), but their findings are not integrated into a clear theoretical framework. This paper will attempt to develop an explanatory model of the influence of advergames on players’ perceptions and behaviour by combing the theory of the ‘state of flow’, with the AIDA model.

One of the main challenges of online marketers is the development of effective advergames. In one of the few studies devoted to advergaming strategy, Chen and Ringel (2001) provide some guidelines for the development of effective online gaming campaigns, which are founded on the principles of website development (Lazar 2000) and marketing strategies:

1. Advergaming must be developed to a baseline specification which enables it to work effectively on standard browsers, operating systems and hardware;
2. Advergaming works within the context of a media campaign whereby users are led from one medium to another (e.g., from television advertisements or printed material to online games);
3. Market research goals should be incorporated into the interactive environment such that requests for information from players provide valuable information;
4. Advergames are most successful when targeted at those most likely to enjoy online game playing (i.e., 2-12 and 18-49 year olds); and
5. Games should be kept simple, as complex games may deter continued interaction.

Considering the success factors of the digital marketing model identified by Kiani (1998), Buckner et al. (2002) show how these principles can be applied in the advergaming context (see Table 1).

<table>
<thead>
<tr>
<th>Success factors in digital marketing</th>
<th>Application to advergaming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attract users</td>
<td>Promote games by emails; advertise games on gaming websites</td>
</tr>
<tr>
<td>Engage users interest and participation</td>
<td>Provide participants with stimulating and motivating games</td>
</tr>
<tr>
<td>Retain users and ensure they return</td>
<td>Reward participants e.g. financially or by offering the prospect of beating top scores</td>
</tr>
<tr>
<td>Learn about user preferences</td>
<td>Identify users’ preferences by providing choices within the game</td>
</tr>
<tr>
<td>Relate back to them to provide customized interactions (through a two way communication channel)</td>
<td>Retain interaction, e.g. by emailing game-related newsletters</td>
</tr>
</tbody>
</table>

The next section of the paper presents the results of a few studies conducted regarding the number, profile and behaviour of online gamers. The following section opens a theoretical debate regarding the mechanism of action of advergames on consumers’ perceptions and behaviour, based on the ‘state of flow’ and the AIDA models. The research methodology of an experiment designed to investigate the influence of advergames on players’ attitudes and behaviour is then explained, and four research hypotheses are formulated. After presenting and discussing the results of the experiment, the paper concludes with a summary of findings and with propositions for future research.

THE DEMOGRAPHIC CHARACTERISTICS OF THE TARGET AUDIENCE

Studies conducted in the US have discovered that games are extremely popular for many categories of online users (Fattah and Paul 2002). Electronic games are now capturing a larger share of consumer time at the expense of traditional media (Skyworks 2007). A study conducted by Jupiter Media found that, in December 2003, 84.6 million people visited online gaming sites (D5 Games 2004b). This number is projected to reach 104 million in 2007 (Skyworks 2007).

The existing studies have identified three main categories of online gamers (Fattah and Paul 2002, Santos et al. 2007):

a. Children and teenagers;

b. Adult males; and

c. Adult females.
Avergame.com, a site dedicated to licensing advergames, is already using this market segmentation, proposing specific advergames for each category of online players (Avergame.com 2007).

Children and teenagers represent the traditional market segment for games. A study conducted in the US by eMarketer provides relevant information about the importance of gaming and online surfing for children and teenagers (Macklin 2006a). The research revealed that 39.4% of children between 8- and 11-year-old and 73.4% of teenagers aged 12 to 17 are regular Internet users. Some of the most popular activities of children and teenagers are playing games (81% of children between 8- and 12-years-old, 78% of teenagers between 13- and 15-years-old, and 72% of teenagers between 16- and 18-years-old), and surfing the web (46% of children between 8- and 12-years-old, 76% of teenagers between 13- and 15-years-old, and 87% of teenagers between 16- and 18-years-old). The popularity of these activities among children and teenagers qualifies them as a main target audience for advergames.

Playing online games represents the number one computer activity for 8- to 18-year-olds, beating Instant Messaging and Email (3RDSense 2006). At least one hour per week is spent by 62% of teenagers playing online games, with 34% playing over 6 hours per week (3RDSense 2006). An example of online advergaming campaign directed at children and teenagers is the Virtual Magic Kingdom, created by Disney in 2005. The advergame was specifically targeted at 8- to 12-year-olds, offering a virtual visit to all Disney resorts and theme parks (Commonsensemedia 2005). Despite its success, this type of online advergaming campaign has attracted major criticisms regarding the potential negative effects for children and teenagers (Quaid 2006, Williard 2005). Taking advantage of the increased vulnerability of children, online advergames can sometimes use unethical methods to obtain personal information from young players, or to develop long-term dependency on a brand or product (Macklin 2006b). A study conducted by The Kaizer Family Foundation regarding the marketing methods embedded into the advergames targeting children has found that (Lelchuk 2006, Moore 2006):

- many advergames include various features to encourage repeat playing;
- 25% of websites offered a membership opportunity for children age 12 or under, such as registering or joining a club to get access to special activities or secret games;
- 13% of the sites include polls or quizzes, often used to ask personal opinions about products;
- nearly half the sites include a movie or TV tie-in;
- 38% of the sites offer incentives to get the user to buy more food so he or she can collect points, which can then be exchanged for new games, brand-related clothes or other products.

The idea that only children or teenagers are interested in interactive games was contradicted by research findings. In the US, 66% of the most frequent game players are over 18 years old, with the average age of a player being 28 years (D5 Games 2004b).

The initial demographic characteristics of the average Internet user before 2000 was male, young, white, upscale; however, with the increase of Internet penetration worldwide, nowadays online users can be found in all demographic categories (Assael 2005). Depending on the brand being promoted, advergames producers are targeting young male users aged 18 to 24 years, young male adults aged 18 to 35 years, or more mature male players aged 35 to 65 years old (Fattah and Paul 2002).

Another study conducted during December 2003 – January 2004 in the US, has identified the women over 40 years old as a major segment interested in online gaming (Arkadium 2004). These female game-players spend 9.1 hours per week playing games (or 41% of their online time in comparison with only 26% of the online time for men). This trend seems also to be present in other parts of the world, with the exception of Asia (Wi-Fi Technology News 2005). A global survey conducted by Global Digital Living indicated that among Internet households in North America, 52% of women play online games each month compared with 39% of men. Similar gaps regarding online gaming exist among Internet households in Europe, 39% of women and 28% of men, and in Australia, 53% of women and 27% of men (Wi-Fi Technology News 2005). Only in Asia these gaming activities were almost equal between women and men, at 49% and 50%, respectively (Wi-Fi Technology News 2005).

The reasons for playing online games vary depending on the gender. The main reason of women is to relieve or eliminate stress, while men are attracted by the competitive factor of Internet gaming. Women prefer word and puzzle games, while men are more interested in sport, combat or casino games (Arkadium 2004, Fattah and Paul 2002).

The geographical location of the players seems to make a difference in terms of the type of game preferred and the reasons for playing (Arkadium 2004). In Atlanta the main reason identified was the elimination of stress, in Dallas people play to alleviate boredom, in San Francisco the players are enjoying the competition, and in Washington DC they play online in order to get trained for real casino gambling. Although these findings are too superficial for defining the profile of players, they raise the problem of online game adaptation to the specific characteristics and preferences of a clearly defined population, based on segmentation, targeting and positioning. Fattah and Paul (2002) indicate four possible ways to target a specific category of users with advergames:
1. The advergame content is tailored to suit the targeted customer – games of strategy are directed towards upscale, more educated users, while action games are appealing more to younger players.

2. The channel used to promote the advergame – using email marketing campaigns or websites.

3. Adapting the contest structure of the game to a specific target audience – how players win the game.

4. The geographical location of players, when demographic information is used to facilitate the access of gamers to the promotions launched by local dealers or retailers.

Although the profile and the evolution of the main demographic categories are not yet clearly defined, the data presented above is very encouraging for the advergames industry. The number of people accessing online games is huge and growing every day, these players representing excellent prospects for advergaming marketing campaigns because of their interest in online gaming. However, more market research studies are necessary to identify the number and the profile of online game players in different parts of the world. Until now, the majority of such studies were conducted in the US, the figures describing the population of online players in other countries being vague and controversial.

**THE ADVERGAMES’ INFLUENCE ON CONSUMER PERCEPTION AND BEHAVIOUR**

The placement of products or brand names in movies or TV shows is a relatively old technique, but studies regarding their influence on consumer perceptions and behaviour are inconclusive (Gould et al. 2000, Russell 2002). The advergames present a few distinct characteristics that can eventually enhance their marketing effect:

- the advergames are selected by the player himself/herself, and are not forced upon an unwilling viewer;
- the player interacts with advergames adopting an active stance, in comparison with the passive attitude of the TV audience;
- advergames encourage players to share the gaming experience with their friends or family.

From a marketing point of view, the advergames attempt to capture the attention of players, and expose them to static or dynamic representations of brands, products or services, in order to modify their attitudes and behaviour (Deal 2005). The psychological foundation of this process is the inducement of the ‘state of flow’. This concept is used by psychologists to describe a mental state in which attention is highly concentrated on a specific process and the environmental information is screened out, the person experiencing a harmonious flow of its present perception (Csikszentmihalyi 1991).

The state of flow is known to create a state of wellbeing, as well as increased perception and learning capacity.

The interaction with Internet applications can induce the state of flow in specific circumstances (King 2003). The most successful websites are the ones that offer interactive experiences, and not simply content (Csikszentmihalyi 1991). The state of flow can be created online if the following essential conditions are combined: user motivation, user telepresence, and interactivity of the Internet application. Telepresence refers to the effect created by technologies which allow people to feel as if they are present, give the appearance that they are present, or have an effect, at a location other than their true location (Answers.com 2007). In the case of advergames, the online technology connects the player to a virtual world, in which s/he interacts with the elements of the game, influencing the outcome. The motivation of the online player is usually a complex construct, determined and shaped by a combination of various needs: relaxation, competition, social interaction, etc., which are satisfied through the interaction with the online advergame. The primary motivation of the online player will determine his/her choice of the advergame, with motivation representing an important segmentation criterion. On the other hand, the maintenance of the state of flow is a dynamic process that depends on the relation between the capabilities of the player and the level of difficulty proposed by the game. Figure 1 demonstrates the three possible scenarios of the interaction between an Internet user and an advergame.

When the capability of the player is lower than the level of difficulty of the advergame, the player will experience frustration and will abandon the game with a negative feeling. If the capability of the player is higher than the level of difficulty proposed by the game, a feeling of boredom is likely to result, having as a direct effect the exit of the player from the advergame environment. Finally, if the capability of the player matches the difficulty of the advergame, the state of flow results and reinforces the motivation of the Internet user to revisit the site and to replay the game. This model contradicts Chen and Ringel (2001) that games should...

![Figure 1. The inducement of the online state of flow in advergaming](image-url)
be kept simple as complex games may deter continued interaction.

Once induced, the maintenance of the state of flow requires a constantly evolving challenge, because the player’s capability is likely to improve after playing the game a few times. This raises the problem of including in the advergame a difficulty progression that can represent a dynamic challenge for players.

In terms of consumer behaviour, one of the most popular models in explaining the effect of marketing communication messages on the prospective customer – the AIDA model – can be used to investigate the possible effects of advergames. Considering the effects of an advergame on the perceptions and behaviour of a player/consumer, we can define a specific influence for every stage of the model (see Figure 2).

Considered in connection with the state of flow, the first stage of the AIDA diagram includes two distinct phases:

- In the first phase, the online advergame should attract the attention of the potential player, either through classical online promotions and/or adverts, or through messages sent by other players. The online user will then decide to play the game or not, depending on his/her level of motivation and on the specific circumstances influencing the online activity (e.g., time available, level of noise, level of stress, etc.);

- The direct interaction with the game will determine either the voluntary exit of the player (because of boredom or frustration), or the experience of the state of flow, when the gaming activity captures the attention of the player, increasing his/her wellbeing, as well as his/her receptivity to the promotional messages embedded in the game.

The stimuli received during the interaction with the online advergame may then arouse the Interest of the player, both in the game itself, and indirectly, in the product/brand associated with the advergame (Deal 2005).

Considering that the ultimate objective of advergaming campaigns is to increase product or service sales, a major problem may appear during the transition between the second (Interest) and the third stage (Desire). Some players might ignore completely the marketing dimension of the advergame and, although they continue to play, their behaviour may not evolve towards the action of purchasing the advertised product.

The application of the AIDA model to advergames has a number of important limitations. First of all, the presented situation corresponds well to a singular company-customer interaction. In order to capture and maintain the interest of players, the company will have to transform the advergame marketing campaign in a dynamic, iterative activity, permanently introducing new and/or more complex games (see Figure 3).

![Figure 2](image_url)

**Figure 2.** The possible influence of the advergame on the perceptions and behaviour of players, explained through the four phases of the AIDA model.
The viral marketing dimension is not represented in the above model. Viral marketing describes any strategy that encourages individuals to pass on a marketing message to others, creating the potential for an exponential growth in the message’s exposure and influence (Wilson 2000). The use of advergames corresponds well to a strategy of viral marketing, which incorporates the following principles (Wilson 2000):

1. give away products or services;
2. provide for effortless transfer to others of these products/services;
3. scale easily from a small to a very large audience;
4. exploit common customer motivations and behaviours;
5. utilize existing communication networks to transfer the products/services, or messages about them; and
6. take advantage of others’ resources (existing users/customers).

Therefore, from the perspective of a viral marketing strategy, the application of the AIDA model to advergames becomes even more complex (see Figure 4). The viral messages sent by players can focus the attention of other people on the features of the existing advergames.

Considering the specific influence of the advergame on the player during the four stages of the AIDA model, it is possible to identify the characteristics of an effective advergame. As any other marketing communication tools, the advergame’s characteristics must be adapted to: (1) the personality of the advertised brand; (2) the profile of the targeted audience; (3) the characteristics of the channel – in this case the Internet; and (4) the strategic objectives of the communication campaign.

The difficulty to evaluate these four variables is probably the reason for the lack of best practices for advergame development in the professional literature. The creation of an efficient advergame is still considered predominantly an artistic work that is difficult to describe in a formal, precise manner. However, some companies specialized in advergames design and development, have defined the following characteristics of an efficient advergame (3RD Sense 2006, D5 Games 2004a, Skyworks 2007, Zodal 2007):

1. Careful selection of the game genre to appeal to target demographic;
2. The game relates closely to the core brand messages to be communicated;
3. The brand message is fully integrated into the game, enhancing both the effect of the game and of the brand;
4. Carefully managed progression from simpler to more complex game levels, compelling the player to improve his/her performance and to stay in touch with the game for extended and repeated brand exposure;
5. Registration system for players inviting them to input personal data in order to post scores or enter competitions;
6. Communication tools that encourage the player to share the experience with friends or relatives – the viral marketing aspect;
7. Competitions with prizes encouraging players to register and to keep returning to the site; and
8. Visible score tables that encourage players to improve their performance, to compete against each other, and to invite other people to join the competition.

This list provides a possible basis for operationalizing the creation and implementation of effective advergames.

Considering the interaction of the player with the online advergame, the creation and maintenance of the state of flow are facilitated by adapting the
design of the game to the primary motivation and to the capability of the player. Once the state of flow is reached, the game should aim to prolong this state, progressively increasing the difficulty of the game in order to match the increasing expertise of the player. At the same time, during the state of flow, the advergame should transmit brand and product information, providing also specific communication channels for viral marketing.

RESEARCH METHODOLOGY

In order to verify the effect of advergames on players’ perceptions and behaviour, a simple experiment was designed and applied in Montpellier Business School, France, during January and February 2007.

Three research hypotheses were formulated and tested during this experiment:

Hypothesis 1: The lack of previous knowledge about the advergame facilitates the experience of the state of flow.

Hypothesis 2: The players experiencing a state of flow will increase their consumption of the promoted brand/product.

Hypothesis 3: The players experiencing a state of flow will communicate with more people about the advergame.

In the first stage of the experiment, 200 first year students aged between 20 and 24 years, were asked to fill in a questionnaire about their buying habits of two competing soft drinks brands: Pepsi and Coca-Cola, as well as about their knowledge of advergames related with these two brands. Then, in the second stage of the experiment, they were invited to access the websites of the two brands and to play the games available online. Finally, in the third stage of the research project, 10 days after they had been asked to play the games, the students were given a second questionnaire, focused on their evaluation of advergames, the effect of viral marketing induced by these games (communication with other people about these games), as well as on the evolution of their buying behaviour as a result of their exposure to advergames.

The variable used to measure the buying habits of the participants was the frequency of purchase of Pepsi and Coca-Cola soft drinks:

- more than once a day – very frequently;
- once a day – frequently;
- once a week – occasionally
- once in several weeks – rarely; or
- no purchase – never.

The previous knowledge about Pepsi and/or Coca-Cola advergames was categorized either as ‘yes’ or ‘no’, while the evaluation of the advergame applied the feelings defined in the state of flow model: boring, absorbing or frustrating. For the purpose of the analysis, the people evaluating the advergames as ‘absorbing’ were considered to have experienced the state of flow, but the intensity and the length of this phenomenon were not measured. Finally, the number of people contacted by participants in relation to the advergame was categorized in four categories:

- more than 7 people;
- 4 to 6 people;
- 1 to 3 people; or
- no person contacted – none.

The data collected were analysed using the SPSS software in order to identify possible statistical relationships between these variables.
THE EFFECT OF ADVERGAMES ON PLAYERS’ BEHAVIOUR

Table 2 and 3 demonstrate that there is a statistically significant relationship between the previous knowledge of respondents about the advergames and the induction of a state of flow, to a level of \( p < 0.0001 \). In fact, the results indicate that many players exposed to already known games show a certain ‘fatigue’, the game being considered boring. This indicates the importance of introducing new advergames; once played, the game may become uninteresting, losing its capacity to induce the state of flow. It is also interesting to note that no respondent has indicated frustration, which can be explained by the low-level of difficulty of these advergames. The first research hypothesis is therefore validated.

Table 4 shows that advergames have an impact on the buying behaviour of respondents. The frequency of consumption for both Pepsi and Coca-Cola has generally increased after the exposure to advergames. It is interesting to note that the percentage of people answering ‘Never’ to the consumption of Coca-Cola has increased after the exposure to the advergame. A possible explanation of this result is the negative effect of Coca-Cola advergame on brand perceptions and future purchase intentions for a few respondents.

This effect is more important for the participants who experienced a state of flow during their interaction with the advergame (see Tables 5 and 6). The results indicate a statistically significant influence of the state of flow on the buying behaviour of players, and validate the second research hypothesis.

In what concerns the viral marketing effect, Tables 7 and 8 show that the players who experienced a state of flow tended to communicate to more people than those who found the advergame boring, which validates the third research hypothesis. However, the results indicate quite a large proportion of participants did not contact any other person, although they indicated the existence of a state of flow. This element is difficult to explain taking into account only the variables measured in this experiment, further research being necessary to clarify the relationship between the state of flow and viral communication.

CONCLUDING REMARKS

Advergames represent a new area of study, which is extremely important considering the quick development and application of new technologies in advertising – such as the Internet. Until now, very few academic studies have been initiated on this subject, most of the secondary information about advergames design and

Table 2. Cross-tabulation between previous knowledge about advergames and their evaluation – for Pepsi advergames

<table>
<thead>
<tr>
<th>Previous knowledge/</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of advergame</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Boring</td>
<td>42</td>
<td>23.2</td>
</tr>
<tr>
<td>Absorbing</td>
<td>139</td>
<td>76.8</td>
</tr>
<tr>
<td>Total</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi Square = 21.734; \( p < 0.0001 \); df = 1

Table 3. Cross-tabulation between previous knowledge about advergames and their evaluation – for Coca-Cola advergames

<table>
<thead>
<tr>
<th>Previous knowledge/</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of advergame</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Boring</td>
<td>30</td>
<td>18.3</td>
</tr>
<tr>
<td>Absorbing</td>
<td>134</td>
<td>81.7</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi Square = 28.13; \( p < 0.0001 \); df = 1

Table 4. Purchase frequency before and after exposure to advergames

<table>
<thead>
<tr>
<th>Consumption of Pepsi before exposure</th>
<th>Consumption of Pepsi after exposure</th>
<th>Consumption of Coca-Cola before exposure</th>
<th>Consumption of Coca-Cola after exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>( N )</td>
<td>( % )</td>
<td>( N )</td>
<td>( % )</td>
</tr>
<tr>
<td>Very frequently</td>
<td>34</td>
<td>17</td>
<td>38</td>
</tr>
<tr>
<td>Frequently</td>
<td>16</td>
<td>8</td>
<td>54</td>
</tr>
<tr>
<td>Occasionally</td>
<td>32</td>
<td>16</td>
<td>36</td>
</tr>
<tr>
<td>Rarely</td>
<td>90</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>Never</td>
<td>28</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
<td>200</td>
</tr>
</tbody>
</table>
Table 5. Cross-tabulation between the evaluation of Pepsi advergames and the change in the buying behaviour

<table>
<thead>
<tr>
<th>Communication/Evaluation of advergame</th>
<th>Increase in purchase frequency</th>
<th>Same purchase frequency</th>
<th>Decrease in purchase frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Boring</td>
<td>3</td>
<td>5.5</td>
<td>40</td>
</tr>
<tr>
<td>Absorbing</td>
<td>52</td>
<td>94.5</td>
<td>87</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100</td>
<td>127</td>
</tr>
</tbody>
</table>

Chi Square = 32.098; p < 0.0001; df = 2

Table 6. Cross-tabulation between the evaluation of Coca-Cola advergames and the change in the buying behaviour

<table>
<thead>
<tr>
<th>Communication/Evaluation of advergame</th>
<th>Increase in purchase frequency</th>
<th>Same purchase frequency</th>
<th>Decrease in purchase frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Boring</td>
<td>6</td>
<td>14.6</td>
<td>39</td>
</tr>
<tr>
<td>Absorbing</td>
<td>35</td>
<td>85.4</td>
<td>109</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100</td>
<td>148</td>
</tr>
</tbody>
</table>

Chi Square = 10.861; p = 0.004; df = 2

Table 7. Cross-tabulation between the evaluation of Pepsi advergames and viral communication with other people

<table>
<thead>
<tr>
<th>Communication/Evaluation of advergame</th>
<th>More than 7 people</th>
<th>4 to 6 people</th>
<th>1 to 3 people</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Boring</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td>Absorbing</td>
<td>6</td>
<td>100</td>
<td>82</td>
<td>83.7</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>100</td>
<td>98</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi Square = 23.954; p < 0.0001; df = 1

Table 8. The influence of the evaluation of Coca-Cola advergames on the communication with other people

<table>
<thead>
<tr>
<th>Communication/Evaluation of advergame</th>
<th>More than 7 people</th>
<th>4 to 6 people</th>
<th>1 to 3 people</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Boring</td>
<td>5</td>
<td>21.7</td>
<td>9</td>
<td>12.7</td>
</tr>
<tr>
<td>Absorbing</td>
<td>18</td>
<td>79.3</td>
<td>62</td>
<td>87.3</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
<td>71</td>
<td>100</td>
</tr>
</tbody>
</table>

Chi Square = 13.539; p = 0.004; df = 3
development being provided by the professional literature.

An analysis of the existing market research reports shows the high popularity of online gaming among many different socio-demographic groups, demonstrating the future potential of advergaming campaigns. On the other hand, the knowledge about the profile, size and evolution of these publics is still superficial and fragmented, increasing the uncertainty of any prognosis regarding the future development of the advergaming industry. The performance of advergames as marketing tools is also conditioned by the development of more precise segmentation and targeting methods, which should connect the design and content of online games with the needs and expectations of a specific target audience. This paper has provided a review of the existing studies which investigated and defined the demographic characteristics of the main target audiences for advergames.

The present paper represents an attempt to develop a theoretical framework explaining the way in which advergames are able to influence players’ attitudes and behaviour. By combining the concept of the state of flow, defined by Csikszentmihalyi (1991), with the AIDA model, the process of player-advergame interaction is analytically discussed, and the potential mechanisms of attitudinal and behavioural change are identified. This model is then completed with the viral aspects of the online marketing campaign.

The influence of advergames on players’ behaviour regarding specific brands was tested using an experimental approach which involved 200 first year students. The research showed a clear statistical relation between the capacity of the advergame to induce the state of flow, and a change in the buying behaviour of players. The participants experiencing the state of flow were also inclined to initiate viral communication with more people. Unfortunately, the limited size of the sample does not allow a valid generalisation of results, more research being necessary to confirm and expand the findings of this study. Future research should investigate the influence of advergames on various socio-demographic groups (in terms of age, gender, education and lifestyle), focusing on the elements that induce the state of flow, and on the changes in players’ attitudes and behaviour.

References


