

A Quantitative Content Analysis on Food-based Advergames Aimed at Children

The Honors Program

Senior Capstone Project

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ABSTRACT

The point of this study is to examine the types of persuasive appeals embedded in food-based advergames aimed at young children. This study will further attempt to assess the impact such targeted advertising might have on young boys and girls in their relationships with a food brand. A content analysis of 13 child-based food-focused advergames was performed to quantitatively support and demonstrate claims made by past researchers on the effects of advergence marketing to children. Some of the main goals of this study were to determine the power and goal of advergames, utilize the quantitative content analysis results to discover what marketing tactics are used in the games to develop a strong brand relationship and further investigate the claim that advergence-based advertising to children is unethical. The results of the content analysis support previous literature on the impact advergames can have on children's brand opinions. The majority of the advergames analyzed had game features similar to a non-branded game and strategic marketing features to increase brand exposure to the players. Most notably, all of the advergames in this study had embedded logos, characters or other brand market on the screen and in the background of the game. The results of this study further support the ethical issues advertisers face as they market their products to a particularly vulnerable consumer base – children –employing a medium many critics inside and outside the advertising industry deem unfair. The results have added to existing literature and provided quantitative support to the impact advergames have on children as a result of unnoticeable marketing techniques.

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INTRODUCTION

The objectives of this project are to further explore the nature and impact of advergimes directed towards children and explore the possible ethical dilemma marketers may be faced with when targeting children. The content analysis focused on the communication messages children see in online, interactive food based games. The goal of this nominal quantification is to explain and support results from past research that have concluded marketing does have negative impacts on children. The content analysis' goal was to establish the various marketing techniques used in advergimes to encourage a child's opinions and preference towards that particular brand. With the completed content analysis and its quantifiable data, I have been able to further confirm the potential harmful effects advergimes have on children. The purpose of this study is to provide quantifiable results to further support the existing literature on the negative impact advergimes have on children and add to the general information on marketing to children.

The research questions that will be examined and evaluated by the completion of this project are:

- *Do the persuasive tactics support research on the negative impact marketing has on children?*
- *Can advergimes impact a child's brand perception?*
- *Do advergimes represent an area of unethical marketing?*

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The scope of my project involves a deep analysis of the nature of advergimes and the impact they can have on children, as well as the ethical implications marketers may face when targeting kids. The content analysis results have provided more insight on the types of marketing techniques used in advergimes to significantly influence a child's brand preference, loyalty, and purchasing tendencies. By focusing on the types of marketing messages and content throughout the game, I was able to determine how children could be persuaded. That discussion has also been expanded to the topic of potential unethical marketing to children tactics. As what many would consider stealth marketing, this Capstone Project attempted to uncover more ugly truths about marketing to children.

Before conducting the quantitative content analysis, the first part of my project focused on previous research on marketing to children. This research included studies, experiments, and articles that explored the impact marketing has on children, advergimes as a medium, and both sides of the ethical and advergence effects arguments. Understanding past research and the conclusions experts have made helped me form my own opinions and interpretations of the data. Since there are large amounts of data supporting the argument that there is a negative impact in marketing to children, I have based the discussion of my results off of previous studies. Therefore, the literature that concluded there are negative implications in marketing to kids, provided a framework for the analysis of my content analysis. In order to properly construe my results to further the wealth of information on the topic, I have referenced and used the published literature as a guide when analyzing my findings.

Through a content analysis I examined the gaming landscape, structure, its marketing techniques and popularity of various food-oriented, child-based advergimes. This form of

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interactive marketing has become a newly significant tool in marketing campaigns targeted to children because it allows children to engage in an interactive environment, where player-to-product exposure is high. Consequently, a strong relationship with the brand is developed through repeated exposure of branded characters, consistent color schemes, and many other variables. This study has been able to shed light on a child's brand preference based on consistent measured variables found in the advergime. In order to determine the child's likelihood of preferring a brand with an advergime versus one without, the content analysis was used to determine the relative emphasis of the marketing trends used in the games such as repeated branded characters or product usage. This method of observation and measurement "takes the communications that people have produced and asks questions of the communications" (Kerlinger 1964). Because a content analysis cannot assess the effects of communication messages, the literature previously published has served as the basis of result analysis and discussion.

Although the scope includes the origins of an advertising platform, advergimes, I expanded it by exploring the communication aspects of advergimes. The results of the content analysis have helped me further confirm that advergimes are a source of potential negative influence on children and add to the existing literature. This specific content analysis described the content of a message within the advergime and serves to establish future research. The communication emphasis was seen through the effects this medium has on children. The ethical communication focus of this project explored the methods used by marketers to attract children to their products.

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This project was worth doing because based on all the literature and scholarly results I have read, it is important that all members of society should be aware of the potentially negative effects media can have. In my opinion, based on my familiarity with many scholarly articles, the media and advertiser's strategic use of media can and do create child consumers. To marketers this can be seen as a good thing because the children will grow up to buy their products. However, the child consumers will lack media literacy knowledge and may well come to define themselves by the products and brands they own and use. These child consumers could grow up in the societal norm of overconsumption of advertisements, screen time, and owning unnecessary products. As a newer medium, advergimes are a good topic to research because they can still be investigated and interpreted in many different ways. Any information on this topic and its effects can be helpful to parents as they should guide their children in becoming a media literate young adults. Because there is an endless amount of literature on the negative impacts of marketing to children, I believe my content analysis on various advergimes has quantitatively supported and enabled further research on these topics. Instead of creating an entirely new hypothesis, the content analysis results have been a quantitative manifestation of the literature previously published.

METHODOLOGY

I have conducted a quantitative content analysis, a common and well-regarded methodology in advertising, marketing, and communication research. It is a "method of studying and analyzing communications in a systematic, objective, and quantitative manner for the

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purposes of measuring variables.” It is typically used “to determine the relative emphasis or frequency of various communication phenomena” (Kerlinger, 1964, p. 544).

I have utilized the conceptual analysis method of the content analysis to examine the content in advergames to make inferences between the marketing methods and its potential effect on children. The topics of research for this particular analysis are the negative impacts interactive advertising have on children and the potential brand perception advergames produces.

Through the use of online articles and data on Statista and other websites, I found 13 advergames based on the brands most recognizable with kids. Appendix A shows the list of games and their corresponding food category. As a benchmark study I utilized a study by Hurwitz et al titled *Food Marketing to Children Online: A Content Analysis of Good Company Websites*. Their study analyzed food and beverage brand websites to measure the online marketing tactics and the nutritional levels of each food. Through their initial website audits, they found a majority of the websites had at least one advergame. By using the Hurwitz et al study as a guide for my analysis, I was able to utilize the codes they created and used on their content analysis of websites and games. The codes were already tested with naïve coders and passed an inter-code reliability test. The codes that focused on the game features were music, scoring, multiple levels and explicit invitations to continue playing game. The codes used to test the marketing features used in each advergame were brand markers embedded in background of game, companion ads for brand/food products, primary goal of game to manipulate branded food items, recommendations of other advergames, product code needed to start game, player can manipulate branded food items to earn points, player can embody a piece of food while playing the game and player can embody a product

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mascot (character) while playing the game. In order to collect the data, I played the game once through without any stopping until I either died, lost or ran out of time. During the second round of playing, I coded each game and put a 1 next to each code found in the game on an excel sheet. I continued this process until all 13 games were coded and the marketing and gaming features analyzed were quantified.

A content analysis is a common research method in this type of research as it offers several advantages to researchers exploring the content of a message. In addition, as intended in my research, the quantitative data from the content analysis is often used as a basis or jumping off point for some larger discussion. This method of study allows me to quantifiably analyze the coded form of the marketing techniques used in an advergime. Advertisers rely heavily on advergimes as one of their most powerful interactive advertising channels, so a content analysis has focused on that central aspect of social interaction. Based on content analysis results, one will be able to help describe why marketer's use the tactics they do and how many times children are exposed to branded messages. By counting the repeated exposure of those codes, future research and discussions based on conclusions of previous studies will be able to uncover the latent meaning of the advergime content (Stacks et al 1999). Content analyses are an unobtrusive way of analyzing interactions and provides a foundation of understanding into complex models of language, graphic, and game use. Since this project does have elements of communication research, a content analysis provides experts a form of measurement based on messages and can help describe a communication phenomenon.

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LITERATURE REVIEW

Introduction

Previous literature has established that advergimes maintain significant influence on children's brand preference; this project serves to further explore and expand on social, cultural, and environmental climates where advergimes shape perception. Outside of the realm of ethics, it has been proven that interactive mediums directed towards children have an impact on them. In reference to ethics, advergimes have a unique impact on shaping a child's brand perception. Previous research has not fully explored the specific content within food-based advergimes directed towards children. This important aspect of the interactive medium warrants further exploration, particularly when ethics and scope of influence on children is considered. This Honors Capstone Project evaluated advergimes and provide quantitative results to further support, expand on, and offer new insights not fully explained by previous research. By comparing and contrasting various scholarly articles that studied different mediums, exploring the role ethics play in marketing to children, and including comparative methodologies from multiple, literature based backgrounds, this project will offer a unique insight into the impact advergimes have on brand preference, lifestyle, and consumer tendencies.

According to a chart below from Statista created by eMarketer, one can see the amount of times the internet was used as of March 2014 by gender. As 41.5% of boys access the internet multiple times a day, they are constantly searching and finding new entertainment to keep them occupied.

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Frequency with which children in the United States used the internet as of March 2014, by gender

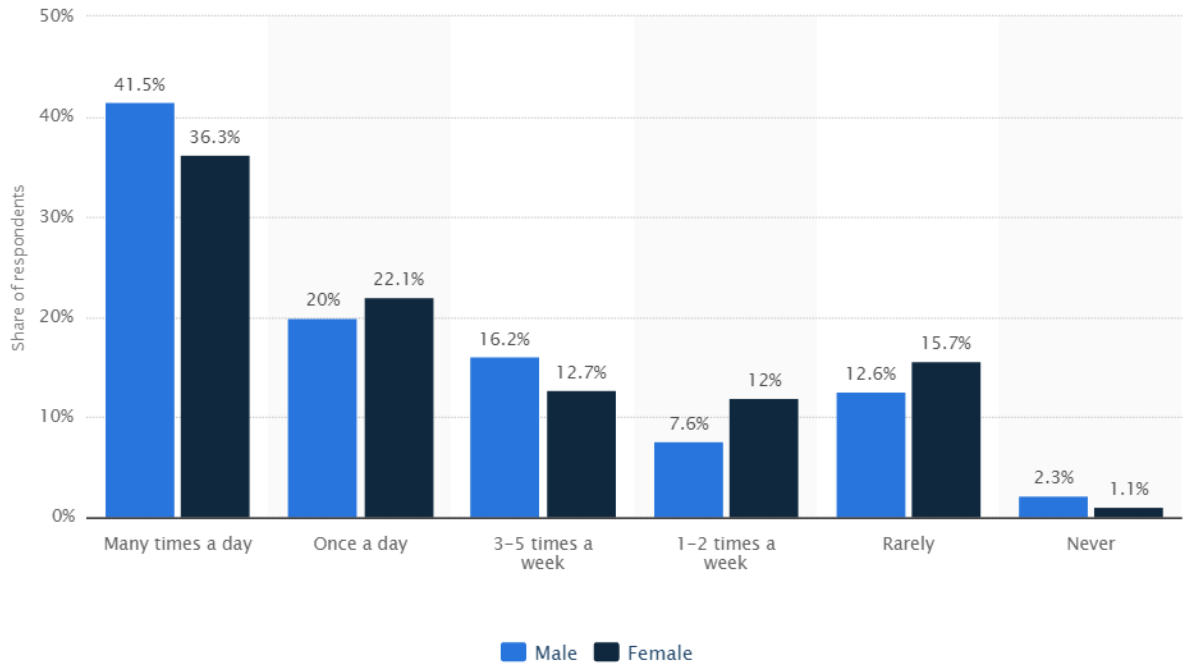


Figure 1 Frequency of Children Using the Internet

To understand what children are doing on the internet many times a day, the chart below produced by Statista shows the most popular online activities for both boys and girls are playing games and watching videos. It is interesting to point out that both online activities are highly visual and can attract a child's attention for longer amounts of time.

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Most popular online activities of children in the United States as of March 2014, by gender

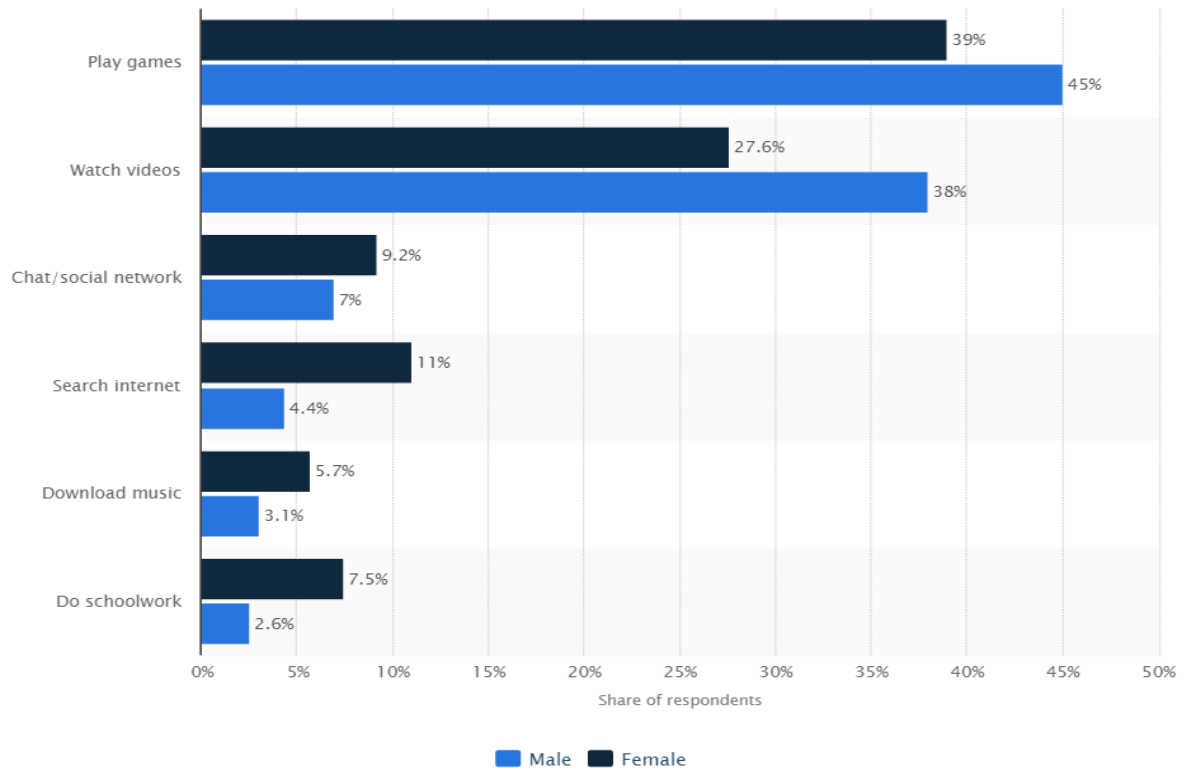


Figure 2 Most Popular Online Activities

According to "The Online Marketing of Food to Children: Is It Just Fun and Games?," "seventy-one percent of children ages 8–14 access the Internet at least once a week and spend an average of 19 hours online each month" (Moore et al 2007). As the number of children accessing the Internet increases, the amount of potential exposure to advertising messages also increases. This project aims to move beyond correlation and touch on causation, as related to the influence advergames have on children, what can be done to educate parents and children alike, and what responsibilities fall on companies as they target children. Online marketing allows advertisements to uniquely integrate into children's websites and games.

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Since children are spending more time online, more research and studies must be done to explore the type of content they are engaging in for that length of time.

“Report of the APA Task Force on Advertising and Children” focused on the psychological implications of the increasing commercialization of childhood, in particular television advertising, and commercialism in schools. Based on the experimental task force that was strongly supported by empirical evidence, researchers found that television advertising directed to children below the ages of 7-8 is “inherently unfair” because they do not understand the persuasive content and cannot comprehend the advertising message. The main arguments were found in the implications of children's cognitive development for understanding the potential effects of exposure to advertising and to specific harms that might result from exposure to advertising (Wilcox et al 2004). Children present a vulnerable population since they have not yet completed all phases of cognitive development. Given the research in completed in the primary medium of television, this Honors Capstone Project utilized television research to further understand advergimes directed towards children. Much of the psychological evidence related to television commercials translates to advergimes. However, since advergimes are an inherently different medium and means of communication between consumers and products, a content analysis is required to quantify advergimes’ effect.

The question of ethics further drives the argument of this Honors Capstone Project, as research has examined the cognitive ability children have to distinguish between an advertisement and entertainment. In the “Pop-ups, pop-unders, banners and buttons: The ethics of online advertising to primary school children” article, the authors explored the

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cognitive and social development of children in great depth. Although most research on advertising to children has been discovered in the medium of television, it has long been argued that, “both ability to distinguish advertising from programmed content and the skills required to understand persuasive intent are primarily driven by age-related cognitive function” (Nairn et al 2007). In order to understand a child’s social development, social perspective taking and impression formation must be taken into consideration (Nairn et al 2007). Proceeding through a child’s first stage of social development, the analytical stage of 7-11 years old is arguably the most significant time a child has to develop an appreciation for advertising messages and consumer opinions. After age 11, children tend to develop a better understanding of advertising and its affects, as well as a more robust understanding of the market economy.

The authors in the “Pop-ups, pop-unders, banners and buttons: The ethics of online advertising to primary school children” article based their understanding of ethical implications of television off of a previous study during the 1970s and 1980s. In summary, “if children do not fully understand the persuasive intent of advertising then they are unable to mount a cognitive defence and are therefore at risk of unethical manipulation by advertisers,” (Nairn et al 2007). As a result of the ethical claims made, it will be interesting to study advergimes and why they attract and maintain children users. “When we apply these psychological concepts to the fast-moving world of internet advertising, it becomes apparent that children have even less psychological protection from potentially deceptive practice, for the online environment is fundamentally different from television...Viral marketing implicates the child in becoming an active advocate for a product; advergimes create a bond

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with the brand based on emotions of winning and losing;" (Nairn et al 2007). The demand for the research on emerging media environments on the internet will also further the significance of this Honors Capstone. A solid foundation of psychological and ethical considerations exists across various forms of advertisement, interactive and advergimes included, so that existing ideas may be built on and new analyses may come to light.

In Baker and Martinson's study of the *Tares Test: Five Principles for Ethical Persuasion*, they developed a comprehensive list an individual may consult when deciding if an advertisement is ethical or not. The test focuses on the moral boundaries advertisers must adhere to and provides the individual a clear understanding of how an ethical message should be crafted. The Tares Test consists of five principles: Truthfulness (of the message), Authenticity (of the persuader), Respect (for the persuadee), Equity (of the persuasive appeal) and Social Responsibility (for the common good) (Baker et al 2001). This test is a perfect way to analyze advergimes because those messages should be the most ethical as children are usually their target audience. The Tares Test is useful to advertisers and consumers alike; for the former it is an excellent measure of the content's ethical weight, and for the latter it is a lesson in consumer awareness and competency. The test can serve as a barometer for where advergimes fall on the ethical spectrum.

In *Children's understanding of advertisers' persuasive tactics*, a study was conducted to explore children's understanding of persuasive tactics advertisers use in their messages. Based on the literature reviewed by the study authors, they establish six persuasive tactics that are most commonly used and effective in advertisements directed toward children. The six tactics are, ad repetition (the advertisement is repeated several times); product demonstration (the

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advertisement shows how a product works); peer popularity appeal (the advertisement shows one or more children eating or playing with the advertised product); humor (the advertisement is funny); celebrity endorsement (the advertisement shows a popular cartoon character, TV or music star presenting the product); and premiums (the advertisement promises a freebie to go with the purchase of the product) (Rozendaal et al 2011). Those six tactics will provide this Honors Capstone a framework to operate within when categorizing the persuasive characteristics in the advergimes. They also enable us to use specific terminology already used in this research topic, and to demonstrate its relatedness to new finding in light of further exploration of the interactive medium targeted at children. This source reflects the lens of my project because the study was aimed at examining which advertising tactics were most prevalent in a group of advergimes.

To focus on the future effects advergimes have on kids, *Pop-ups, pop-unders, banners and buttons: The ethics of online advertising to primary school children* explored children's understanding of advergimes as a specific and unique interactive medium. In this source, a study was conducted to assess the scope of advertising formats children ages 7-11 from the UK were exposed to. In support of more restrictions on online advertising in the UK, two sets of codes were created to regulate advertising content and advertising labelling directed towards children. Researchers analyzed content based off of the top 50 most popular websites with children and had 500 children aged 9-13 list their favorite websites from that bigger list. Among other analyses, one to highlight is the result of websites' compliance with regulations. Based off the two separate lists of guidelines codes, results showed that, "compliance with codes relation to the exploitation of children's developing cognitive defense mechanisms,

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however appears to be very poor. Specifically current advertising formats do not enable children to make an easy distinction between content designed to persuade and content designed to entertain” (Nairn et al 2007). The results of this study further supports the lens in which I will be examining the content in advergimes, which is that advergimes do have negative implications in regard to influencing children. The article also provides a scope of the problem as demonstrated by lack of advertisers’ compliance with regulations; this offers insight into potential solutions, the extent of which may only be gleaned through the lens of previous research in combination with this content analysis and project. It is proven that advertisers have found new techniques to reach children, such as advergimes incorporating popular characters and interactive banners to integrate the commercial message into rich, engaging interactive and entertaining information about a product.

Background/History

Experimental Evidence on the Impact of Food Advertising on Children’s Knowledge about and Preferences for Healthful Food article conducted a study that examined the effects of commercial food communication directed toward children and its contributions to childhood obesity and overconsuming societies. The results of this study proved that advertising has different effects on children’s food preferences and knowledge, based on a number of factors including environment, development, and the ability, or aptly inability, to process the full context of an advertisement. The article drew upon other significant research in the field that stated, “media environment and in particular commercial communication (e.g., food advertising and all kinds of stealth marketing) have been shown to shape food-related knowledge, attitudes, preferences, and practices both directly and indirectly” (Reisch et al

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2013). There is a clear intersection and relationship between the interactive nature of advergaming—with their psychological, ethical, environmental implications—and the influence they have on food preference. The authors of this article found that there is empirical evidence suggesting knowledge about healthy or unhealthy nutritional preferences, attitudes, and choices are affected by food advertisements. For example, experimental research has shown that, “commercials for unhealthy foods relate directly to lower levels of nutritional knowledge” (Reisch et al 2013). Not only did this study provide evidence that food advertisements relate to nutritional knowledge, but it also further supports the need of better regulation of food advertisements directed towards children, in light of the often negative health effects rooted in advertising to children. When these nutritionally devoid advertisements manifest themselves as advergaming and pair foods with a child’s favorite character, there are significant implications for future health habits and food preference.

In 2011, Cicchirillo and Lin published *Stop Playing with Your Food*, a comprehensive article that conducted a study examining food-related advergaming content for for-profit and non-profit organizations’ websites. Through this comparison, Cicchirillo and Lin were able to expose and explain the creation of advergaming, a newer way for marketers to advertise food-related content to produce greater revenue. According to literature research done by Cicchirillo and Lin, it was found that young Americans spend an average of an hour a half on the computer every day, not including school work. As a result, there is ample opportunity for advertisers to target this medium given its high traffic volume in their target population. They also defined advergaming, a term that describes marketers’ use of branded products or images within a form of interactive gaming. The game is based off of products the brand sells and

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also includes branded characters, therefore making it an advergame. The interactive game always incorporates some form of advertising through the characters in the game or the products being used to complete the challenges. In advergames produced by food brands, the children on these sites are not just playing an innocent game with food in it, they are learning about the brand, shaping their eating habits, and developing their attitudes toward the branded product being used in the game (Cicchirillo et al 2011). Their research found that the nature of advergames encourages brand attachment as children are persuaded by new levels, power-ups, or characters in the game to keep going. This level of enticement is quite difficult for any child to resist, which lays the basis for why advergames have been successful for advertisers. It's also the reason why the onus is on advertisers and regulators consider the ethical implications of interactive gaming as a marketing technique, particularly when children are the primary target.

In an article published by *Critical Studies in Media Communications*, the author focused on the cereal industry and its online advergame counterpart. In television commercials, marketers are limited in the messages they can communicate to the audience. For example, in a traditional commercial, the actor can be holding or consuming the product, whereas interactive advertising allows its consumers to simulate behaviors they would not be able to tap into when just watching a commercial (Thomson 2010). In comparison to the traditional television commercials, individuals have the ability to be in charge of the branded item and manipulate it in the way they want to. In short, the consumer's experience of the advertisement and the brand itself transitions from passive observation to actively engaged, interactive exploration. This is a dynamic shift that creates an environment where

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establishment of brand preference and a personal connection to the product are fostered, take root, and are solidified over time. Furthermore, advertisers are not limited by time constraints as they are in more traditional television commercials. Players are enjoying a virtual world that they can be constantly engaged in for prolonged periods of time, rather than passively watching a short lived television commercial. In the author's review of his literature research he added, "85% of the food brands that target kids via television have corresponding online sites featuring advergimes in which players can spend hours interacting with branded spokes characters and virtual food items and icons" (Thomson 2010). Thomson's research alluded to the fact that marketers have found that the use of product-themed interactive digital games can influence consumers the same if not more than traditional television commercials.

Advertisers are able to provide the tools and foundation for each *individual* to craft a personal association and connection to the product; by welding associations of brand and self– through an interactive platform–on a psychological, emotional, and conceptual level, advergimes intensify the consumer experience in a manner that other commercial mediums simply cannot.

The main goal of the advergime is to immerse the player into the branded products and characters through narrative challenges and journeys (Thomson 2010). According to Thomson in his study on cereal advergimes, he suggests "online marketing creates that transformative 'magic circle' of play that is so intensely absorbing that children can spend hours online in marketing worlds, experimenting with branded virtual identities, traveling through corporate-created cyber environments, and working toward mastery of digital advergimes" (Thomson 2010). As a result of users playing for hours at a time, they soon become addicted to not only the game, but the product being sold. In many ways the products and the game become one in

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the same. Some advergimes use a story line and branded characters to take the player along a fantasy journey, making the kids excited and anxious to play on to the next level or section of the journey. Advergimes have the ability to tap into children's imagination, desires of exploring, magic, and finding treasure (Thomson 2010).

"Mum, Can I Play on the Internet?' Parents' Understanding, Perception and Responses to Online Advertising Designed for Children, is a pioneer study in developing more information on the new generation of media technology and the importance of media literacy. This study found that, "a total of 73% of children's websites use advergimes, i.e. online branded games, to subtly embed marketing messages into own-branded games" (Cornish 2014). Advergimes are almost always free of charge and found on either the homepage of the brand or a popular online gaming website. The ease of access players have to the games enables them to play on any device at any time, which increases their brand exposure and awareness. Prolonged exposure undoubtedly leads to a much stronger, more personal association with the product.

The cyber world created by marketers allows its players to form strong bonds with the product as they work so closely with it and its respective character or characters in the games. Players are turning into branded consumers that feel an emotional connection to the brand, making them brand loyal in future purchases. Studies have shown that repeated brand exposure can ultimately lead to brand loyalty and result in high levels of brand awareness among children (Cornish 2014). Advergimes have the ability to reach children and transform them into brand loyal consumers at an alarmingly young age. Ethical implications loom large when children are in very early stages of cognitive development, as previous studies have demonstrated and as has been discussed above. A marketer's goal is to be as subtle as possible when delivering

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marketing content, and that goal is exceedingly easy with advergimes. In combination with the embedded commercial goals and addictive entertainment, players develop brand relationships that are not soon forgotten. Players are eager to share their scores and achievements in the game with their peers, so they in turn are endorsing the brand without even realizing it (Cornish 2014), while encouraging others to do the same. This process of consent with cognizance lends directly into the argument for the unethical nature of advergimes, because their target audience is utterly unable to decide for themselves whether they wish to develop such a brand preference.

Since the most popular advergimes are from companies in the food industry, they are teaching kids to indulge in the wrong kinds of snacks and beverages: “In the case of unhealthy foods, advergimes might be partially responsible for heightening children’s desire for such foods and yet parents appear to be oblivious that their children might be subjected to such advertising on a regular basis through indirect online advertising” (Cornish 2014). Cornish points out that teaching kids to be media literate must occur early and often so they are able to defend themselves against stealth marketing tactics found online. If this type of education is presented to children during the same cognitive stages of development that make them unassuming targets, it stands to reason there will be a positive impact on media literacy and personal choice in brand preference. Empowering children with this approach of cautious skepticism enables them to recognize subtle marketing messages and in turn make more informed choices.

As new advertising techniques develop, parents must do the same and effectively monitor what and how long their children are receiving the stealth marketing messages (Cornish

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2014). Despite the need for children to become more educated in media literacy, parents must also be digitally literate to maintain effective guidance over their children. As digital advertising through interactive advergimes continues to rise, parents have to be aware of the stealth marketing and persuasive messages their kids are exposed to. Parents are just as responsible as kids are for differentiating between advertising and entertainment, as well as recognizing the persuasive messages and marketing bait they are exposed to (Cornish 2014). As with many other social concepts and responsibilities, parents, caregivers, and educators must encourage youth to recognize advertisements and persuasive techniques when confronted with them. Media literacy relies heavily on socialization. While regulators can safeguard children against unwarranted exposure to advergimes, a far better solution is to couple those regulations with ethical considerations at the industry level and socialization at home, in school, and throughout communities. Given the vast amount of exposure to advertisements and products that children will inevitably face, and the fact that socialization is the bedrock for moral standards, education and social development, and other aspects of daily life, the question remains: why isn't media literacy given a solid foundation as well?

In an effort to further support claims that advertising has a powerful influence on children's brand preference, researchers in 2011 conducted a neuroimaging study to examine the neural response children have to logos. With prior research indicating advertising to children is pervasive and manipulating in their product choices, researchers wanted to scientifically prove how a healthy child's brain responds to food logos. After conducting a pilot study and second study using a functional magnetic resonance imaging (fMRI) machine, researchers were able to confirm that food logos in comparison to nonfood logos, activated specific brain

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regions known to be associated with a child's motivation. "This marks the first study in children to examine brain responses to culturally familiar logos. Considering the pervasiveness of advertising, research should further investigate how children respond at the neural level to marketing" (Bruce et al 2012). This study has truly shifted the direction of research on marketing to children and opened up a wide range of scientific avenues to explore these claims.

Research on marketing aimed at children has evolved and changed dramatically as technology advances. As mediums have changed, developed, and also become obsolete, the research on this topic has also expanded in many different directions. *Children and television advertising: When do they understand persuasive intent?* is a great example of research on a traditional medium. Advergimes, another medium used to market to kids is not at its mature stage as a result of the constant evolution of interactive advertising mediums. This article explored the level of recall of scenes and brand names of commercials in comparison to the children's age at the time of the experiment. Since television has become available in almost all parts of the world, researchers have been able to do extensive research on commercial advertisements and children's exposure to the messages. As a result of rapid global Internet growth, more and more children are being exposed to Internet screen time on laptops, computers, iPads and similar devices, and smartphones. Researchers now have to do studies and experiments on marketing techniques on the Internet to uncover the same theories and statements as they did with television advertisements. Researchers must analyze interactive marketing, which provides customers a two-way communication with the company. Different mediums will inherently have varying effects on individuals and the consumer market at large; the only way

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to ascertain these effects is through an experimental, quantitative analysis of a representative sample exposed to the interactive environment consumers find themselves in on a daily basis.

In a groundbreaking article published in 2012, three researchers set out to prove that children are likely to be persuaded by advergimes. Empirical evidence was limited at the time, so the researchers aimed to provide quantitative results to match previously established qualitative data. The authors conducted a study that examined the three dominant factors based on secondary research, that associated with advergimes; game involvement, brand prominence, and limited persuasion knowledge on cognitive and affective responses. The results of an experiment among 105 children ages 7-12 years old produced three conclusions based on the three areas of exploration; brand prominence evokes cognitive responses (i.e., brand recognition and recall), game involvement leads to affective responses (attitude toward the game and brand), and children's persuasion knowledge regarding advergimes is limited and does not influence the effects of the advergime (Reijmersda et al 2012). With an increase of interactive advertisements, this pioneering study has provided researchers a good benchmark study for further exploration into the milieu of advergimes. By combining a quantitative approach with what is already known regarding the emotional, cognitive, and psychological aspects of advergimes, new research can predict trends in interactive gaming while simultaneously offering potential solutions to inherent problems that arise from marketing to children and other vulnerable groups.

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Review

In another ground breaking a study analyzing the health messages on the cereal website Millsberry, the author described this issue; “caloric moderation is contradicted by digital advergimes that operate on a logic of maximal consumption, by narratives of branded spokes characters’ endless appetites for cereal, and by giveaways of ‘free’ boxes of virtual cereal that can be eaten by the Buddy in a single bite” (Thomson 2011). For advergimes in the food industry, it is crucial the parent remain knowledgeable about what branded product is being advertised to their child. Parents must be media literate enough to recognize when marketers are trying to shape their products to appear healthy, such as adding a food pyramid, when they are trying to market food with high caloric content (Thomson 2011). Some advergimes try to convey an image to their users that they appear to be healthy, without including any nutrition information or advising the players to only eat the food in limited amounts at a time, and as part of a balanced diet paired with regular exercise. Marketers are rewarding high consumption of processed foods and drinks in the game, therefore making the child users desire praise for the same actions in real life. This issue significantly influences a child’s food preference and nutritional intake as they are being conditioned to remain stagnant and basically play with food for hours. Experts have researched and proven that food marketing does influence a child’s eating behavior and increases the numbers of childhood obesity in the overall population (Thomson 2011). According to Thomson’s article, “study suggests that all online food advergaming should be critically scrutinized by researchers, parents, and public officials alike because of the intense level of engagement such games foster among youth and

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the increasing use of these games as marketing tools to sell unhealthy foods” (Thomson 2011).

In the changing marketing environment, researchers are now exploring the social responsibility companies have to children consumers. This is particularly important considering that children both craft their own brand preference when exposed to advergimes, and exert influence on purchasing decisions as a result of their reinforced product partiality. In *Advertising to children and social responsibility*, Chris Preston researched the ethics of marketing to children in a capitalist perspective. Preston stated, “there is, however, a strong social concern about the effects of advertising upon children, yet there is confusion about exactly what it is that constitutes the problem” (Preston 2005). Preston believes anything that contributes to the economy through sales, profits, and revenues should be held to social responsibilities. He raises the issue on marketers and advertising practitioner’s knowledge on children’s behaviors and interactions with marketing content. By them studying children’s minds, they utilize that knowledge to sell their products. Preston questions the company’s social responsibility and ethical choices by studying a group of consumers that have not matured. “If younger children’s behavior is being influenced by advertising, yet they are not entirely clear as to what advertising is then advertisers should be concerned with the ethics of social responsibility, as a vulnerable section of society is targeted when it can be strongly argued that they should not” (Preston 2005). This article also mentioned the FSA and The Consumers Association’s rising awareness of marketing to kids and the affects is has on their food preferences. It is found that parents are struggling to provide a healthy, balanced diet for

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their kids because of their rising interest and desire in high-caloric food. Therefore, more research has been done on the effects of marketing to children and their consumer behaviors.

In *Advertising to children and social responsibility*, the author, Chris Preston, interestingly includes arguments on both sides of the marketing to children discussion. Preston says it can be argued that since advertising to children produces economic growth and future consumer expenditure, the action is socially responsible. As a result of advertising being an integral part of the economic socialization process, children learn the importance of consuming to continue to the cycle of consumer expenditure. However, Preston also stated that there are raising social concerns over the vulnerability children are at risk to when consuming advertising messages at a young age.

Preston explored the arguments involving social responsibility and found that the economic prosperity of child consumers can benefit the entirety of a society. In a contrast viewpoint, since marketing activity does contribute to the economy, the company should maintain a level of social responsibility. The ethical nature of these arguments Preston says can depend on one's personal experience, knowledge, and opinions on the topic. From a parental perspective, Preston argues that parents are indirectly targeted by the advertisements towards children because they are being nagged by their kids to buy the products on the marketing messages. Researchers believe that children are influenced by the advertising messages because they are increasing their demand for the advertisement and desire to own the product. Opposing viewpoints would argue that, "as credit keeps the economy going, it is unlikely that accusations of social irresponsibility by influential bodies representing consumers and poor

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families will ultimately influence the amount of credit available in the marketplace” (Preston 2005).

Preston points out that, “the socialization of children into consumers is necessary given the capitalist system’s need for future expenditure” (Preston 2005). This view of advertising and children is clear to many economists and marketers as they are fixated on maintaining the expenditure growth. In comparison, he reminds readers that based on his research, there are many other opinions that disagree with that statement. Critics of marketing to kids are looking at the advertising industry as a whole and raising valid questions on whether the industry is acting responsibly towards not only kids, but parents as well. It is important to highlight another contrast; “If younger children’s behavior is being influenced by advertising, yet they are not entirely clear as to what advertising is then advertisers should be concerned with the ethics of social responsibility, as a vulnerable section of society is targeted when it can be strongly argued that they should not. It is difficult to conceive of an argument in favor of advertising directly to very young children” (Preston 2005). In the realm of advergimes, it is impossible to divorce ethical concerns from the powerful nature of the interactive medium itself.

Another piece of literature explaining a marketer’s perspective of advergimes was Gunter’s book called *Kids and Branding in the Digital World*. Throughout each chapter, Gunter explored various platforms marketers use to reach children and explained the origins of advergimes. Many years ago marketers would utilize product placement as a way to expose a brand on a screen for longer than a traditional advertisement. Advergimes became an extension of product placement and allowed marketers to embed brand markers into the game

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and create entire visuals surrounding the brand. Marketers also utilized the advergimes to draw attention in a new and playful way with a younger demographic. Often times the younger demographic would reject a marketers advertising message. However, with this new form of interactive marketing, brands are able to reach new audiences and provide them entertainment along with advertisements they'll adopt (Gunter 2016.) On the opposing side of the argument, Gunter also eluded to the ethical side of this digital medium. Gunter said that since players don't recognize the marketer's intent to sell them things, marketers are at fault for undermining the consumer's lack of understanding and knowledge. The innocent kids are playing games that are intended to change their opinions on a certain brand or product, yet they do not understand someone is taking advantage of them. This book served a wide range of interesting and important topics necessary to become fully educated on advergimes and digital marketing as a whole.

Children and television advertising: When do they understand persuasive intent? performed two experiments to infer the cause and effect of the level of commercial recognition a day later and the age of the children. Similar studies to test a child's recall of brand names and content of the advertisement are used to analyze children's ability to remember commercials and the age they recognize advertisements. In this particular study after children were shown various commercials, children of different age groups were asked to recall brand names, stills, content, and what the purpose of advertisements are. Researchers gathered quantitative results from the experiments to calculate different percentages, tables, and statistical conclusions. Studies in this field utilize experiments to manipulate variables and discover its effects to further support claims made by researchers. These types of experiment studies give

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researchers quantitative data to compare with the secondary research they found prior to the experiment. The quantitative data can correlate to the qualitative data found in many other studies on this topic.

In a study titled, *Coddling Our Kids: Can Parenting Style Affect Attitudes Toward Advergimes?* authors examined parents understanding of advergimes directed towards children using exploratory interviews and surveys. By combining the exploratory interviews qualitative data to the quantitative survey responses, researchers were able to make claims based on both the results. Many studies similar to this one use both quantitative and qualitative because it gives researchers the ability to analyze advergimes, a newer medium, with a wide range of data. Both basic and applied research are used in studies on this topic because researchers want to gain more knowledge on the advergence medium, as well as answering a specific research question. Researchers are aware of the need to gain more insight on the nature of advergimes and its influence on children since it is vastly different from television and other traditional mediums that have been explored for decades.

One piece of literature that I intend to directly add and expand information to is *Mitigating the Effects of Advergimes on Children*. Arguably the most important piece of my literature review, authors An and Stern conducted a study to determine if using an advertising break for an advergence will help children recognize the game being a form of advertising. Before they conducted their study, they did a literature review on “Children’s Understanding of Advertising” and introduced the Persuasion Knowledge Model to help describe the process one has when developing the ability to understand and identify the nature of advertising. This model says that consumers, including children, gain knowledge throughout their life span and

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continuously develop the capacity to understand all persuasive tactics. Since children are only at the beginning stages of this model, they do not possess the full cognitive ability to understand the underlying meanings for persuasive attempts. Advergimes, generally targeted towards 7-13 year olds, access children that are both “cued processors,” which are children that need a reminder to retrieve persuasion knowledge and children that have higher levels of persuasive knowledge and skills to recognize the messages called “strategic processors” (An et al 2011). By having a range of ages playing the advergimes, some children do not recognize the embedded marketing content and some do. Based on the Persuasion Knowledge Model, as children who are of a certain age become suspicious of the advergime, they are more likely to disengage and recognize ulterior motives of the game.

Therefore, the purpose of their study was to test the effects of an ad break as they “expected the presence of ad breaks to intervene in the persuasion process, influencing children’s brand recall and performance” (An et al 2011). It is important to highlight the results of their study as I will be attempting to further quantifiably explain the use of marketing techniques within the advergimes. Based on their experimental, between-subject design of 112 fourth-grade students, they found that children who were exposed to the ad break were not necessarily better prepared to realize that the advergime was sponsored by a cereal company. They also found that the ad breaks were not significant enough to make the children understand the underlying message to consume their food. The authors’ discussion regarding their results will be a crucial point of reference for me as they did go in depth on the possible justification and reasoning for those results. My content analysis will further the research on this study because

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I will be analyzing the specific deliberate and embedded marketing content, as well as the types of ad breaks used throughout various advergimes.

Conclusions

Based on the literature, the research published by previous experts have supported and solidified the main ideas as to why I am performing a study to further attempt to assess the impact such targeted advertising might have on young boys and girls in their relationships with a brand, brand loyalty level, and overall health effects. The information from the literature informs my ideas and will support the claims made throughout my content analysis. The most significant discovery I made while compiling the literature is the strong empirical evidence established by researchers to further support their claims on an issue. The ability to take a communications and marketing topic and create experiments, content analyses, and surveys was truly inspiring. To transform claims based on secondary information into quantitative, primary data proved to be very significant task in my literature review.

The literature explored a wide range of important topics regarding advertising mediums, marketing to kids, and the ethical nature of advertising, that helped further shape my overall knowledge of this subject. Based on the review it is clear there are a plethora of studies and articles that statistically prove marketing does influence a child in some way whether it be neurologically or quicker brand recognition. Since there are such strong correlations to marketing and children, the claims made throughout the analyzation of my content analysis will be based on the main ideas and results of the literature.

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RESULTS

RQ1: Persuasive Tactics to Support Research on the Negative Impact Marketing has on Children

The first research question sought to gain insight on the advergime environment and provide data on the various features or marketing techniques used throughout the game. The findings show that non-branded game features were significantly prevalent in the branded games. 54% of the games had multiple levels, 92% had music, 100% had some type of scoring component and 85% had explicit invitation to continue playing the game. The results of this content analysis can be applied to the previous research that supports arguments on the negative impact marketing has on advergimes because of the limitless time for playing and high amounts of brand exposure to children. With similar gaming features to a non-branded game, kids are more likely to integrate the game into their daily lives and consistently play the game because they cannot fully recognize the difference between the game and advertising.

RQ2: Advergimes Impact on a Child's Brand Perception

The second research question hoped to explore the strategic branding aspect of the games and the level of significance it could have on a child's opinion towards a brand. The results show that all 13 games had embedded brand markers in the background of the game. 63% of the advergimes primary goal was to manipulate branded food items, 69% allowed the player to either embody a piece of food or character and 69% of the games used the food to somehow earn points. These results highlight the marketing features used in the game to shape a child's perception of a particular brand. The high use of brand embodiment and exposure inevitably

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produces opinions and emotions towards a particular product. 46% of the games allowed the player to share their score, which invited them to join a virtual world to compete in. This social aspect transcends beyond the screen because children are encouraged to share their scores and can feel like they need to share their experiences with their friends at school or on the playground. This word-of-mouth marketing attracts more kids to the game without the brand having to do any work to get new children on the game.

RQ3: Ethics of Advergames

The final research question provides readers data to understand the ethical dilemma marketers face when producing content to children. Two codes that were not included in the benchmark study were tested, 'ad break' reminders and an advertising notice on the game screen. Only 23% of the games had reminder and option to stop playing and go do another activity or continue playing and 46% had an advertising notice present throughout the game. These findings as well as the brand embodiment and usage data can quantitatively explain the high level of advertising tactics projected at kids, which marketers are responsible for. The results on the game features also seek to present an argument that since advergames are almost exactly like non-branded games in structure, kids do not realize this is a specific game to sell them things.

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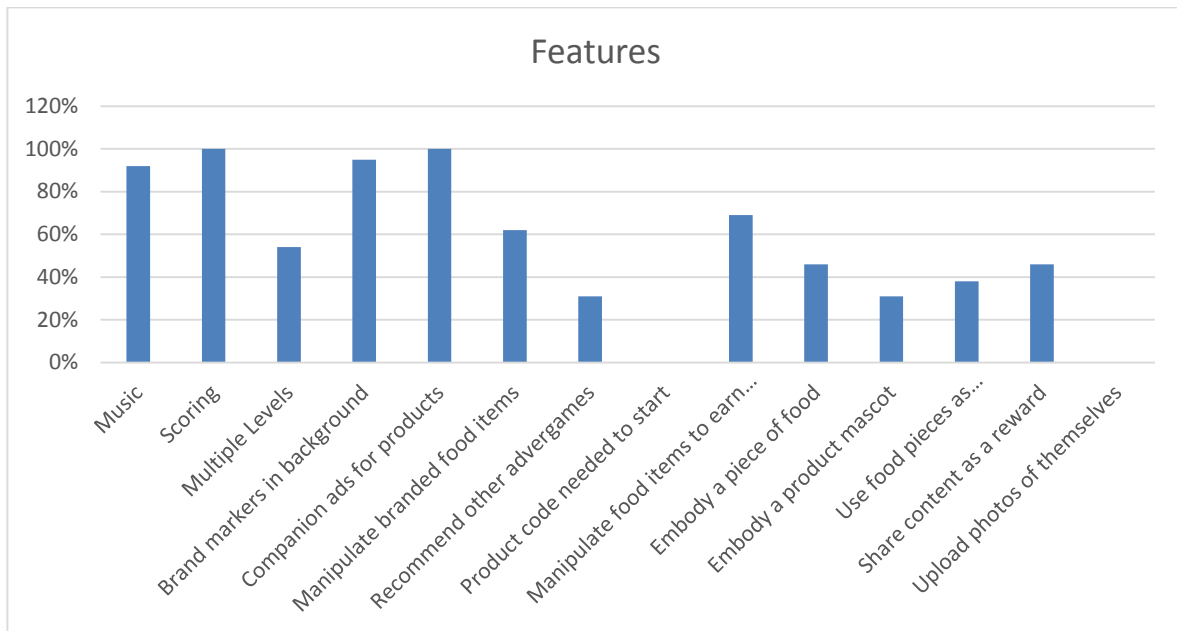


Figure 3 Results of Content Analysis

DISCUSSION

Based on the knowledge of previous literature exploring advergames and marketing to kids, my results indicate that there are strategic persuasive tactics to attract children to a brand, form a relationship with them and develop an opinion on the brand. While playing each game, a user can get so involved with the game play that they start to normalize various brand markers presented on the screen. The embedded brand markers become subliminal messages and can impact the player when they are deciding which brand of cereal to buy a day later. For a child, it is often difficult or impossible to recognize that the advergame has the intention to sell them the branded food item because of the replication of non-branded game features.

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The use of persuasive tactics in majority of the games analyzed in this content analysis have represented the subtle marketing techniques previous literature has described. Companies have condensed their promotional material and strategically scattered it throughout the game screen. The image below serves as an effective example of these marketing tactics. In a Froot Loops game sponsored by Kellogg's, the copy used to describe the concept of the "Run-A-Wave" game attempts to form a bond between Toucan Sam and the player. The syntax used to explain what the concept of the game is utilizes words such as "safety" and "outrun." The words seek to create not only the scoring at stake, but an emotional friendship between the player and Toucan Sam. The brand is putting responsibility on the player to protect and provide food for him. In the description of how to play the game, one can see how visual and easy to understand it is. By using a picture of a Blooper and bowl of cereal to signify what they need to collect, the players are forced to remember the visual queue. The entire purpose of the game is for the player, who is embodying Toucan Sam, run and collect the branded food items before the big wave catches up to them. Not only are they being exposed to the Froot Loops brand, they are repeatedly seeing the Blooper's and bowls of cereal. As the player starts to familiarize themselves with the images, it is safe to assume they will be able to easily recognize them in the store. Another technique to point out in this specific example is the lack of attention to the advertising reminder on the bottom left corner. All other buttons and icons on the screen pertaining to the game are clearly pointed out with an arrow and short description of it, but not for the advertisement warning. This particular game seemed to reflect a lot of what the literature had eluded to on the specific types of promotional tactics tailored to

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fit the younger demographic.

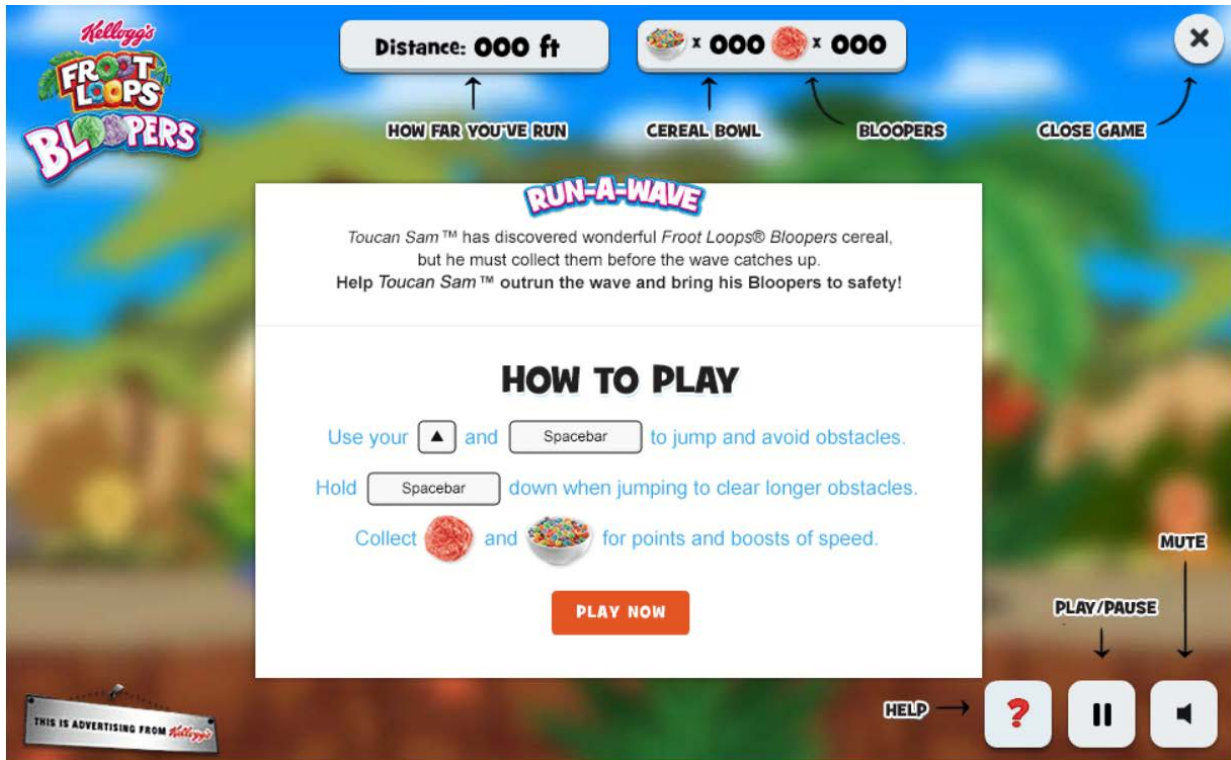


Figure 4 Club Kellogg's Froot Loops Bloopers Run-A-Wave AdvergAME

My findings represent empirical data to further support existing literature on the brand perceptions children can form after playing an advergAME. By allowing the player to control the branded items to gain rewards, this classically conditions children to associate winning the game or moving on to the next level with a happy branded character, brand/company or hunger satisfaction. The same association is utilized in the real world as kids can expect getting the branded food when they did something well. The emotional connection a player can establish while winning and losing with a brand marker can further develop the relationship with the brand and alter brand perceptions. Kids are fostering a new friendship with the branded character or food item as they embark through this virtual adventure with

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limitless playing time. This virtual world to engage, share and compete in allows players to seamlessly transfer between brand relationships virtually and in reality. As a result of children's high level of impressionability, these characters or branded food items can stick with a child. This can even provide marketers a way to persuade the same child when they grow up through nostalgia tactics.

LIMITATIONS

With only analyzing 13 advergimes, the sample size of this particular study was small. However, the codes used were based off of an extensive content analysis focusing on 95 websites and 86 advergimes. Another limitation was not working with children to further test their opinions and analyze primary data. By working with the kids, this project could have recorded and analyzed their reactions or specific opinions right after playing a game and in a real world buying situation when they are faced with choosing between the advergence brand and a different one. Furthermore, this project only focused on food-based advergimes and not all advergimes across various industries.

CONCLUSION

Although the advergence landscape has changed over the decade, there is still plenty of research to be done on them. As advergimes continue to circulate on the wide world of the internet, children are becoming increasingly defenseless to the subtle bombardments of

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advertising content. In congruency with the literature, the results of my content analysis can support the reasons why marketers use strategic brand elements and advergime tactics to drive consumer perception. The commonality between the features in advergimes analyzed indicates the consistent structure marketers utilize to attract and manipulate children into playing with their brand. The high brand exposure and repetition significantly make a difference in shaping a child's consumer behavior and preferences. The features analyzed in the content analysis demonstrate a marketer's ability to take advantage of a fragile and growing consumer that does not have enough knowledge to defend themselves against persuasive messages. It is the marketer's responsibility to recognize their unethical behavior and company's responsibility to better reflect the character of their organization.

This Capstone Project sought to support the existing literature on marketing to kids and the nature of advergimes. Based on the results of the content analysis and the discussion topics that were articulated, this project has added to the quantitative data of advergimes and further explored the reasoning behind specific marketing tactics aimed at children. Future studies could focus on the lack of regulations and consequences of marketing to children. Another study future research could be based off of is why the number of advergimes have been decreasing or changing platforms from the company website to other online game websites.

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APPENDICES

Appendix A- Content Analysis Games and Categories

Brand/Game	Food Category
Doritos- "Chip Defender"	Chips/Snacks
Oreo's- "Oreo's O's Extreme"	Cookies
Club Kellogg's Froot Loops - "Run-A-Wave"	Cereals
Taco Bell- "Taco Fu"	Fast Food
Club Kellogg's Rice Krispies- "Rockin' with the Bars"	Cereals
KFC- "KFC Kitchen"	Fast Food
Hershey Kisses- "Chocolate Collector"	Candy
McDonald's Happy Meal- "Happy Ghost Surfer"	Fast Food
M&M's- "The Lost Minis"	Candy
Cheeto's- "Chester Cheetah Mini-Putt Golf"	Chips/Snacks
Pepsi- "Pepsi Pinball"	Soft Drink
Club Kellogg's Eggo- "Get Your Bounce On"	Frozen Food
Lunchables- "K-Catch"	Prepared Meal

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