ESSAY 5: IMPACT OF NATURE OF ADVERGAMES ON BRAND RECALL AND BRAND ATTITUDE AMONG YOUNG INDIAN GAMERS: MODERATING ROLES OF GAME-PRODUCT CONGRUENCE AND PERSUASION KNOWLEDGE

Abstract
This essay investigates the varying effects of advergame speed on brand recall and attitudes under varied game-product congruence and persuasion knowledge conditions from attention, elaboration and persuasion perspectives, addressing the research questions 1, 3 and 8. A 2 (nature of advergame: fast or slow) x 2 (game-product congruence: high or low) x 2 (persuasion knowledge: high or low) between-subject measures design is used. The experimental data is collected from 235 Indian undergraduate and graduate management students. ANOVAs and MANOVA with pre-planned contrasts are used to test the hypotheses. Results indicate that for a slow-paced advergame, low game-product congruence results in higher brand recall than high game-product congruence. For a fast-paced advergame, there is no difference in brand recall between low and high game-product congruence conditions. For a slow-paced advergame with low game-product congruence, subjects with high persuasion knowledge report higher brand recall and less favorable brand attitude than subjects with low persuasion knowledge, whereas no such differences in brand recall and attitude were observed for a fast-paced and low game-product congruent advergame. This study contributes to the literature of advergames by providing an understanding about influence of the game speed and its boundary conditions on gamers’ brand recall and attitude from attention, elaboration and persuasion perspectives.

6.1. Introduction
Today the style of advertising media is changing. Other than the old traditional media platforms, such as newspapers, magazines, radio and television, there are many more new media platforms
available for advertisers which have made advertising very effective, at the same time a challenging one too. Recently, marketers have introduced a new and innovative way of brand entertainment known as advergames to influence customers’ minds (Kinarad and Hartman, 2013). Advergames represent “computer games specifically created to function as advertisements to promote brands, where the entertainment content mimics traditional game forms” (Kretchmer, 2005, p. 7). Brand managers are increasingly exploring advergames as a non-traditional medium to attract young gamers while adding a new stream of revenue. It is based on the belief that promoting a brand through an advergame, a gamer/consumer gets tempted to interact with a brand, this enables a brand to pass its messages to the consumer who in turn can check out on its own ideas and philosophy being promoted by brand thereby increasing a brand’s reach along with high level of consumer awareness. According to a recent report by Newzoo Games Market Research, it is estimated that by the year 2016, the gaming market will become double and reach US $23.9 billion (Newzoo, 2013a).

Research in advergames are more recent and limited (Kinard and Hartman, 2013). Majority of the studies have discussed more about gamers’ attitudes towards advergames (Hernandez et al., 2004; Tina and Buckner, 2006), gamers’ ability to recall, recognize and create brand preferences (e.g., Cauberghe and De Pelsmacker, 2010; Hernandez and Chapa, 2010), advergame content (e.g., An and Kang, 2014; Moore, 2006; Lee et al., 2009; Paek et al., 2014; Quilliam et al., 2011), and gamers’ reaction to the persuasive messages (e.g., Farrar et al., 2006; Nelson et al., 2004; Panic et al., 2013; Waiguny et al., 2012; Yang et al., 2006).

More recently, research has investigated the influence of nature of advergame (i.e, speed of the game: high versus low) on consumers’ attitude and recall towards the brand embedded in the advergame and stated that the nature of advergame differently influences advertising
effectiveness (Vasisht and Sreejesh, 2015a). Interestingly, prior research in traditional advertising media stated that while evaluating the effectiveness of advertising, the congruence between program and the media could be an important conditional factor, which may affect brand recall and attitudes differently, as the variation in this factor leads to different elaboration patterns (e.g., Gross, 2010; Kirachi and Yurdakul, 2012; Peters and Leshner, 2013). Also, consumers’ knowledge about persuasive intent of advergames acting as an elaboration component may produce differences in recall rates and attitudes as advergames are more involving in nature unlike traditional advertising tools (van Reismerdal et al., 2012). Thus, here, the research question arises that: are the findings of traditional advertising context related to the effects of advertising on consumers’ brand outcomes applicable in the advergames context as well? In other words, do the effects of nature of game on consumers’ brand outcomes conditional upon their perceptions about the degree of congruence between the embedded brand and the game? Further, do the simultaneous effects of nature of the game and game product congruence conditional upon consumers’ understanding about the persuasive nature of the advertising formats. Answering these questions are very important because consumer’s attention capacity left to process in-game brand placements is influenced by and conditional upon the elaboration components (e.g., Krugman, 1983; McClung et al., 1985), and these elaborations shape the effectiveness of advergames. To the best of our knowledge, no prior studies have specifically examined the effects of nature of game as a conditional function of game product congruence and consumers’ persuasion knowledge.

In addition, most of the existing studies on advergames are focused on food products and targeted towards children (e.g., Dias and Agante, 2011; Mallinckrodt and Mizerski, 2007; Moore, 2006). Moreover, majority of these studies have been conducted in the context of
developed countries, such as United States, United Kingdom, and Australia (e.g., Mallinckrodt and Mizerski, 2007). However, recent report says that nearly 68% of the video gamers are over the age of 18 (Kinard and Hartman, 2013) and 15% of the world’s population currently generate 74% of gaming revenues (Newzoo, 2013b). This leaves massive room for growth of gaming industry in emerging markets, such as China, India and Eastern Europe, specifically the young consumers. This limits our understanding about advergame effectiveness. Thus, this study contributes to the current literature by examining the advergaming effects on young consumers in an emerging market context. In short, understanding the effects of nature of the game on consumers’ brand attitudes and brand memory and its boundary conditions targeted towards young consumers in emerging market context provides opportunities to determine the types of marketing policies and interventions needed to increase the effectiveness of advertisements in online gaming context.

In sum, the objectives of this study are: (1) to assess the simultaneous impact of nature of game and game-product congruity on consumers’ brand memory and brand attitudes; and (2) to examine whether consumers’ persuasion knowledge about advergames works as a boundary condition for the simultaneous effect of nature of game and game product congruity on brand memory and brand attitudes. Collectively, the intended contribution of this study is to explore how variations in three factors, such as nature of game, game-product congruence and gamers’ persuasion knowledge influences the brand memory and brand attitudes of young advergame players in an emerging market context.

The remainder of the essay is organized as follows. In the next section, we develop a conceptual model based on the Limited Capacity Model of Attention (Kahneman, 1973) and Elaboration Likelihood Model (ELM: Cacioppo and Petty, 1979; Petty and Cacioppo, 1986).
This is followed by a description of the research methodology used in the study. Subsequently, the results are presented, followed by the limitations of the study and future research directions. Finally, the theoretical and managerial implications are presented.

6.2. Hypotheses Development

6.2.1. Nature of Advergames

In general, the dictionary meaning of nature is the “inherent character or constitution of a person or thing” (http://www.merriam-webster.com/dictionary/nature). In the advergame context, nature of game could be called as a combination of various aspects like the game theme (e.g., racing/cooking/adventure/puzzle/fighting game), the objects used in the game, the characters used in the games (e.g., the character Cinnamon is used in FrootLoops advergames), the pace with which the object placed in the game moves, the number of levels, number of players who can play a game at the same time and the difficulty or complexity level of game. Well, nature of game has been defined in a number of ways in the recent literature. For instance, Kureshi and Sood (2009) have defined nature of game term as “the swiftness with which one is required to play the game”. Vashisht and Sreejesh (2015b) has defined nature of game as “the steering speed, the pace with which the objects placed in the game move, the type of game task and the difficulty level of game task”. In the present study, we refer the nature of an advergame to the speed of steering, the speed of moving objects in the game, the type of game task and the difficulty level of game task. In the present research, the effect of speed of game on player’s brand recall is explained from attention and elaboration perspectives, that is, the degree to which a game player is able to process and elaborate upon the presented information in an advergame. According to LCM (Kahneman, 1973; Lynch and Srull, 1982), an individual’s attentional capacity is limited at a given point of time and when an individual performs multitasks at a time,
then, his/her total attentional capacity gets bifurcated into two parts: one is the capacity required for the primary task and another one is the capacity to do secondary task (also known as spare capacity). The capacity that gets used up for the primary task cannot be used again for the secondary task. In an advergame context, for the game players, the primary task is game playing and processing the in-game brand placements is the secondary task (Grigorovici and Constantin, 2004). The more mental resources are used for game playing, the less will remain for in-game advertising processing (Vashisht and Sreejesh, 2015a). Thus, it is expected that in a slow paced advergame, gamers’ brand recall will be higher than that in case of a fast paced advergame. Hence, based on the above arguments, following hypothesis is formulated:

**H1: A slow paced advergame results in high brand recall than a fast paced advergame.**

### 6.2.2. Moderating Role of Game-Product Congruence

In the present study, game-product congruence is referred to the match, connection or similarity between the game content and the brands placed in the game. Previous literature on game-product congruence shows that an ample amount of work has been done to examine the impact of congruence between advertisements and their surrounding media context on viewers’ memory and attitude towards the advertised product (e.g., Lee and Faber, 2007; Peters and Leshner, 2013; Russell, 2002). Studies reconnoitering incongruity between the product category of the advertised brand and the advertising context have revealed that incongruent information is remembered better than congruent information (Dimofte et al., 2003; Russell, 2002). For example, Russell (2002) showed that in a television show the incongruence between the modality of product placement (audio vs visual) and plot connection (high vs low) resulted in high brand memory scores than that in the congruence situation. In the favor of incongruity, it is debated that due to novelty, uniqueness and high noticeability characteristics of incongruent information,
the incongruity captures more mental attention of the consumers (Srull and Wyer, 1989). When this incongruent information bumps in between a program, consumers try to resolve and make sense out of the incongruity, hence, stimulating a more extensive cognitive elaboration and enabling ensuing recall (Mandler, 1982; Srull and Wyer, 1989).

In advergame context, congruity has enthused devastating significance predominantly as previous studies have revealed that congruence in games influences brand memory and brand attitude (Lee and Shen, 2009). In the advergame context, when people identify any incongruity between important persuasive factors, their expectations get invaded which makes them surprised, that in turn upsurges their involvement and henceforth, results in high cognitive elaboration. As a result, the increased elaboration results in an increased brand recall (Petty and Cacioppo, 1986). Therefore, following hypotheses are proposed:

\[
H2a: \text{For a slow paced advergame, low game-product congruence results in high brand recall than high game-product congruence.}
\]

\[
H2b: \text{For a fast paced advergame, there is no difference in brand recall between low game-product congruence and high game-product congruence.}
\]

6.2.3. Moderating Role of Persuasion Knowledge

According to persuasion knowledge model (Friestad and Wright, 1994), persuasion knowledge incorporates an understanding to consumers that the source of advertising formats is commercial and that there is persuasive intent in it. It is argued that, when a gamer is playing a fast game it requires more efforts from the gamer’s side to finish the primary task (playing the game), therefore, game becomes the focus of attention and more involving in nature. Moreover, players face difficulty in recognizing the source of persuasion and persuasive intent of brand embedded in advergames as compared to traditional advertising (Livingstone, 2009; Moore, 2004; Waiguny
et al., 2013), even though it is highly incongruent in nature. Hence, it can be argued that in case of fast-paced advergames with high game-product incongruence, the brand recall differences between the gamers who have high persuasion knowledge and the gamers who have low persuasion knowledge will be low and insignificant. Thus, the following hypothesis is proposed:

\[ H3a: \text{There will be a nature of game} \times \text{game-product congruence} \times \text{persuasion knowledge interaction effect on brand recall, such that, for a fast-paced advergame with low game-product congruence, there is no difference in brand recall between the subjects with high persuasion knowledge and the subjects with low persuasion knowledge.} \]

However, in case of a slow-paced advergame, the gamer’s spare capacity to process in-game advertising will be more than that of a fast-paced advergame player. So, when incongruity emerges in a slow-paced advergame, the player will use most of its spare capacity for cognitive elaboration (Petty and Cacioppo, 1986), and hence will result in high recall. But when persuasion knowledge is provided to a slow-paced advergame player in incongruent condition, the player will start relating the reason of putting incongruity in the game with the ad-persuasion source (Friestad and Wright, 1994), and as a result will result in high recall than the players who have not acquired such persuasion knowledge. Thus, it’s a highly compelling prediction that for a slow paced advergame with low game-product congruence, players’ recall score will be higher when they are provided with persuasion knowledge than when they are not. Thus, following hypothesis is formulated:

\[ H3b: \text{There will be a nature of game} \times \text{game-product congruence} \times \text{persuasion knowledge interaction effect on brand recall, such that, for a slow-paced advergame with low game-product congruence, the subjects with high persuasion knowledge report high brand recall than the subjects with low persuasion knowledge.} \]
In case of fast paced advergames, as the game becomes more involving in nature, more efforts are required from the gamer’s side to play the game (primary task). So, they are left with less spare capacity and hence will not be able to recognize the source of persuasion and persuasive intent of brand embedded in advergames as compared to traditional advertising (Livingstone, 2009; Moore, 2004; Waiguny et al., 2013), even though there is high game-product congruence. Hence, it can be argued that in case of fast-paced advergames with high game-product incongruence, the brand attitude differences between the gamers who have high persuasion knowledge and the gamers who have low persuasion knowledge will be low and insignificant. Thus, following hypothesis is formulated:

**H4a:** There will be a nature of game × game-product congruence × persuasion knowledge interaction effect on brand recall, such that, for a fast paced advergame with low game-product congruence, there is no difference in brand attitude between the subjects with high persuasion knowledge and the subjects with low persuasion knowledge.

Furthermore, limited persuasion knowledge is associated with stronger reasoning and emotional responses (Livingstone and Helsper, 2006). In addition, recent insights from neurophysiological development, psychological development, and advertising processing (Moses and Baldwin, 2005) suggest that when gamers have acquired the required knowledge and understanding about the persuasive intent i.e. the real motives of the advertisers of putting ad in between the game, consumers are more likely to activate and apply this knowledge as a critical defense while processing a persuasive message (Moses and Baldwin, 2005). Thus, with this persuasion knowledge when gamers play a slow-paced advergame having less game-product congruence, they elaborate their reasoning on this rationale that incongruity is present in the game with a motive to influence them i.e. for advertising purpose. Hence, they start detaching
themselves from the advertised product (Friestad and Wright, 1994). This impacts their brand attitude negatively. But in case of gamers with low persuasion knowledge, they will not feel detached from the advertised product as they are not aware about the fact that incongruity in the game is for advertising purpose. Hence, we predict that under the condition of ‘gamers with high persuasion knowledge’ brand attitude will be less favorable in a slow paced advergame with low game-product congruence than under the condition of ‘gamers with low persuasion knowledge. Based on these arguments, following hypothesis is proposed:

\[ H4b: \text{There will be a nature of game} \times \text{game-product congruence} \times \text{persuasion knowledge interaction effect on brand recall, such that, for a slow paced advergame with low game-product congruence, subjects with high persuasion knowledge report less favorable brand attitude than the subjects with low persuasion knowledge.} \]

6.3. Research Methodology

6.3.1. Development of Stimulus Materials

Two pretests were conducted to select the stimulus for the manipulated variables, such as nature of game (fast game versus slow game) and game-product congruence (high versus low). Pretest 1 was conducted in different stages. In stage one, expert interviews with four marketing experts was conducted to generate an advergame theme that is widely used in online advergames (racing, cooking, puzzle, aeronautical, adventure, parlor, role-playing, crime, war and horror). From the expert interview, majority of the experts came to the conclusion that the most played and liked game theme is racing game theme. Therefore, we decided to go with racing game as our game theme. After selecting racing game theme, the same group was asked to suggest fictitious brand names to be included in the game context to promote some of the products. Furthermore, we requested them to categorize these suggested brand names to match with the game context and
the product category. This process resulted in the generation of total 14 fictitious brands (7 brands in high game-product congruence category, and another 7 in low game-product congruence category). In stage two, we approached a game developer agency to create four different advergames (high speed and high congruence, high speed and low congruence, low speed and high congruence, low speed and low congruence) by embedding the already decided 14 fictitious brands in each of the four games, required for our study. The reason behind choosing the fictitious brands for our study is to eliminate the biased effects which could pop up in our study by considering the real brands, as people playing the advergames embedded with real brands might be familiar with these brands.

Pretest 2 was conducted to confirm the process carried out in pretest 1, specifically to confirm that the gamers were able to differentiate between high versus low speed games and also low versus high congruence games. To examine the same, first, we randomly selected participants who regularly play the online-games (40 gamers) to a common computer laboratory. Then, they were asked to rate the perceived speed of the selected advergames (advergames chosen in stage one) on a semantic scale ranging from -3 to +3 (-3 = “very slow” to +3 = “very fast”) after playing them for a specified time frame (10 minutes). The results revealed that the gamers were able to differentiate between fast and slow games. For fast games, the mean rating was found to be high (above 0) as compared to slow games (below 0). Similarly, the examination of congruence between the game context and the product category of the embedded brand through Lee and Faber’s (2007) game-product congruence scale (1 = “totally disagree”, 7 = “totally agree”) shows that the game selected in pretest 1 in high congruence category showed high mean rating (above 3.5) as compared to low game-product congruent advergames (below 3.5).
6.3.2. Participants and Design

To examine the hypotheses a 2 (nature of game: fast or slow) x 2 (game-product congruence: high or low) x 2 (persuasion knowledge: high or low) between-subjects factorial design was employed. The participants were selected from a large Indian University. Studies reported that 90% of teens are gamers (mediaedge:cia 2005), which supports that the use of student sample is appropriate for this study. Gamers selected were between the ages of 17 and 20 years. To avoid the biasness that could pop up in the study by taking technically qualified students as participants, we decided to consider the students of management course for our study. First, a random selection of students was conducted from a list of all the University management students. Then, after seeking their game playing interest they were randomly assigned to one of the four experimental conditions. 235 undergraduate management student gamers participated in the study. These respondents were called to a computer lab where they were asked to play the advergames on individual consoles for a given time period. After exposure to advergames, participants were asked to fill up the questionnaire, with items of manipulation checks and eliciting their responses for measures for non-manipulated independent variable (persuasion knowledge), and dependent variable measures (brand recall and brand attitude).

6.3.3. Independent Variables Measures

In the present study, three independent variables are used. They are: nature of game, game-product congruence and persuasion knowledge. The nature of game and the game-product congruence are the manipulated variables and persuasion knowledge is a measured variable. The manipulation of nature of game was measured on a semantic scale ranging from -3 to +3 (-3 = “very slow” to + 3 = “very fast”) after playing them for specified time frame.

The manipulation of game-product congruence was measured by using a four items seven
point scale (1 = “strongly disagree” to 7 = “strongly agree”), adapted from Lee and Faber (2007). The items are: (1) (product) is an object that can be used during a real-life car racing event, (2) the images I associate with (product) are related to the images I associate with car-racing events, (3) (product) represents a lifestyle associated with those who like to attend car-racing events or watch them on television, and (4) an advertisement for (product) is a good fit for car-racing events.

Persuasion knowledge was measured by using a seven items seven point scale (1 = “definitely disagree” to 7 = “definitely agree”), adapted from Wu (2009). The items are: (1) the way this ad tries to persuade people seem accepted to me (reverse coded), (2) the advertiser tries to manipulate the audience in ways that I don’t like, (3) I am annoyed by this ad because the advertiser seemed to be trying to inappropriately manage or control the consumer audience, (4) The ad was fair in what was said and shown (reverse coded), (5) when I read the ad, I think it’s pretty obvious the ad is trying to persuade me to buy the product (6) I notice tricks in this ad to promote the product, and (7) this ad is meant to sell product.

6.3.4. Dependent Variables Measures

After exposure to advergames, the respondents were asked to recall the brand names appeared in the game and to write down the respective names. During data coding process the individual recall score was calculated based on the number of brands each individual was able to recall out of the total exposed brands in the respective advergames. For example, if a participant listed only one advertised brand correctly out of 7 exposed ads during game play, it was coded as a correct response and was given a numerical value equal to 1, as the numbers of correct responses ranged from 0 to 7. Brand attitude was measured by using a semantic differential scale with the bipolar adjective items (good/bad, like/dislike, favorable/unfavorable, and positive/negative), adapted
from Muehling and Laczniak (1988).

6.4. Data Analyses and Results

6.4.1. Manipulation Checks

Before the examination of manipulation checks, we checked whether the items used to examine the manipulation confirmation of game-product congruence and persuasion knowledge belong to two distinct constructs or not. A factor analysis with varimax rotation confirmed the presence of two factor solutions. Factor one, game-product congruence, accounted for 34.71% of variance and its four items formed a reliable scale as assessed by Cronbach’s alpha (α = 0.74). The second factor, persuasion knowledge, formed with seven items and accounted for 31.25% of the variance (α = 0.53). Thus, the items representing each of these two constructs were separately averaged and analyzed by using two different ANOVAs (Analysis of Variance). The result of manipulation check of nature of game through one-way ANOVA showed a significant mean difference (F (1,198) = 61.662, p < 0.05) between fast advergames (M = 4.655) and slow advergames (M = 3.716). Similarly, the manipulation of game-product congruence through one-way ANOVA showed a significant mean difference (F (1,198) = 27.152, p < 0.05) between high game-product congruent advergames (M = 3.568) and low game-product congruent advergames (M = 3.273). In sum, manipulation checks indicated that both the manipulations were successful. Furthermore, a split on the average ratings of the seven items divided the sample into three groups (high persuasion knowledge = Mean > 5; neither high persuasion knowledge nor low persuasion knowledge = Mean 4; and low persuasion knowledge = Mean < 3). As the study’s prime objective is to examine the role of persuasion knowledge under high and low conditions, the respondents with neither high nor low persuasion knowledge scores were removed. It further reduced the study sample to 219 usable responses, as 16 respondents indicated that they were
never in high nor in low persuasion knowledge groups. Post-hoc analysis confirmed that this split was orthogonal to the other manipulated variables ($p > .10$).

### 6.4.2. Hypotheses Testing

The hypotheses were tested in two stages. First, 2 (nature of game: fast or slow) x 2 (game-product congruence: high or low) between-subject ANOVA was performed. In this, the effect of nature of game on brand recall (main effect) was examined to test hypothesis 1. Then, a two-way interaction between nature of the game and game-product congruence and its effect on brand recall was examined to test hypotheses 2a and 2b. In second stage of analyses, a 2 (nature of game: fast or slow) x 2 (game-product congruence: high or low) x 2 (persuasion knowledge: high or low) between-subject measures Multivariate Analysis of Variance (MANOVA) was performed with brand recall and brand attitude as the dependent measures and nature of the game (speed: high or low), game-product congruence (congruity: high or low), and persuasion knowledge (persuasion knowledge: high or low) as the predictor variables. In this, a three-way interaction (nature of game × game-product congruence × persuasive knowledge) was mainly examined to test hypotheses 3a, 3b, 4a and 4b. After the confirmation of interaction effect, separate univariate tests were then performed on each dependent variable through one-way ANOVAs to further confirm MANOVA results.

ANOVA results revealed that variation in nature of the game significantly influences brand recall ($F(1, 216) = 422.67, p < 0.05, M_{high\text{ speed}} = 2.55, M_{low\text{ speed}} = 3.80$), i.e., low paced game condition resulted in more brand recall compared to high paced game condition. Also, we found a significant two-way interaction effect of nature of game × game product congruence on brand recall ($F(1, 216) = 28.08, p < 0.05$). A detailed examination through pre-planned contrast tests showed that advergame with low product congruence (versus high game-product...
congruence) in slow paced condition was significant and resulted in high brand recall ($F(2, 219) = 88.24, p < 0.01$, $M_{\text{Recall}}$ (slow paced advergame/low game-product congruence) = 4.00, $M_{\text{Recall}}$ (slow paced advergame/high game-product congruence) = 2.96)). On the other hand, gamers who played fast paced advergames under low game product congruence (versus high game-product congruence) showed no difference in brand recall ($F(2, 219) = 2.24, p < 0.01$, $M_{\text{Recall}}$ (fast paced advergame/low game-product congruence) = 2.20, $M_{\text{Recall}}$ (fast paced advergame/high game-product congruence) = 3.00)). Thus, hypotheses 2a and 2b are supported.

Furthermore, the examination of MANOVA results showed a significant three-way interaction between nature of game $\times$ game-product congruence $\times$ persuasion knowledge on brand recall and brand attitude ($Wilks \Lambda = 0.786$, $F(2, 215) = 35.68, p < 0.05$). The detailed examination of the focused contrasts revealed that gamers with high persuasion knowledge (versus low persuasion knowledge), playing fast paced advergames with low game-product congruence condition did not show any significant difference in brand recall and brand attitude ($Wilks \Lambda = 0.421$, $F(2, 215) = 2.85, p < 0.05$, $M_{\text{Recall}}$ (fast paced advergame/low game-product congruence / high persuasion knowledge) = 2.05, $M_{\text{Recall}}$ (fast paced advergame/low game-product congruence / low persuasion knowledge) = 2.55), $M_{\text{Attitude}}$ (fast paced advergame/low game-product congruence / high persuasion knowledge) = 1.89, $M_{\text{Attitude}}$ (fast paced advergame/low game-product congruence / low persuasion knowledge) = 2.10)). It supported hypotheses 3a and 4a. On the other hand, results revealed that that gamers with high persuasion knowledge (versus low persuasion knowledge), playing slow paced advergames in low game-product congruence condition showed high brand recall and less favorable brand attitude ($Wilks \Lambda = 0.521$, $F(2, 215) = 48.85, p < 0.05$, $M_{\text{Recall}}$ (slow paced advergame/low game-product congruence / high persuasion knowledge) = 4.05), $M_{\text{Recall}}$ (slow paced advergame/low game-product congruence / low persuasion knowledge) = 2.55), $M_{\text{Attitude}}$ (slow paced advergame/low game-product congruence / high persuasion knowledge) = 1.89, $M_{\text{Attitude}}$ (slow paced advergame/low game-product congruence / low persuasion knowledge) = 2.10).
congruence / low persuasion knowledge = 3.10)). It supported hypotheses 3b and 4b. Further, results of individual ANOVAs with the three-way interaction of nature of game × game-product congruence × persuasion knowledge as predictors on brand recall (F (1, 216) = 46.25, p < 0.05) and brand attitude (F (1, 216) = 25.08, p < 0.05) were found to be significant. These results reconfirm hypotheses 3a, 3b, 4a and 4b.

From the results of two-way ANOVA and three-way MANOVA, it is very clear that variation in nature of game influences gamers’ brand recall. The results also support the fact that playing a slow paced advergame with low game-product congruence helps the gamer to process the in-game brand advertisements much better than when playing a slow paced advergame with high game product congruence. However, the effect of two-way interaction (nature of game × game-product congruence) on gamers’ brand recall is conditional upon gamers’ persuasion knowledge about the advergames, i.e., the brand message embedded in the game influences the message processing and it is conditional upon gamers’ persuasion knowledge about the advergames. When the gamer understands the persuasive intent of the ad placed in the game, he/she develops a less positive evaluation towards the placed brand whereas, when the persuasion knowledge is low it leads to high evaluation towards the embedded brand which in turn leads to high brand recall. Hence, we found support for all the proposed set of hypotheses.

6.5. Discussion

This experimental study examines the role of nature of game (fast or slow) on gamers’ brand recall and attitudes and how the elaborative components, such as game product congruence and gamers’ persuasive knowledge shape the same. The findings show that slow paced advergames result in high brand recall than fast paced advergames. This finding supports LCM (Kahneman, 1973), that more amount of spare capacity is available with the gamers playing slow paced
advergames as less attentional capacity is required to play the game which in turn results in high brand recall than the fast paced advergame players. Also, this research analyzes whether the interaction of nature of game (fast or slow), game-product congruence (high or low) and persuasion knowledge (high or low) produced significant effects on brand recall and brand attitude. Results indicate that brand recall is better for the slow paced advergames with low game-product congruence condition than the slow paced advergames with high game-product congruence condition. However, for fast paced advergames, no significant difference in brand recall is found between low game-product congruence and high game-product congruence conditions. These findings are in consistent with LCM (Kahneman, 1973). In slow paced advergames with low game-product congruence condition, the spare capacity required to process in-game ads is more than that is required in high game-product congruence condition. Thus, in slow paced advergames with low game-product congruence condition, the gamer is able to process the in-game advertising more easily than high game-product congruence condition. But for fast paced advergames, because of high requirement of mental resources to play the fast games, spare capacity required to process in-game brand placements remains less because of which the gamers are not able to process brand information. Thus, for fast paced advergames, game-product congruence (high or low) cannot make any significant impact on gamers’ brand recall. Furthermore, the findings of the essay also reveal that this processing would be conditional upon gamers’ persuasion knowledge about advergames. When a gamer has persuasion knowledge about placements of brands in advergames, the gamer cognitively elaborates more on finding out the reasons behind embedding brands in games. Hence, this develops a low evaluation towards the brand placed in the game. This in turn results in high brand recall, but it reduces the brand attitude. On the other hand, when the persuasion knowledge
is low it leads to high evaluation towards the embedded brand thus, resulting in more favorable brand attitude.

6.6. Limitations and Scope for Future Research

This studied was conducted among young Indian gamers. The findings of this study can be further tested on gamers from different countries, as the practice of using non-traditional advertising media in different countries is different. Also, a comparative study between countries with higher levels of usage of non-traditional advertising media, such as USA and Australia and those with lower rates of usage of non-traditional advertising media can be conducted in future. As we used only four types of advergames in this study, hence, the essay findings can be generalized and confirmed by considering other types of advergames like adventure, riddle, action, arcade and intellectual in future research studies. Another limitation of this study could be that it tested the moderating effect of game product congruence and persuasion knowledge on gamer’s brand memory and attitude, but roles of some more new factors, such as brand prominence, game involvement prior game experience in determining gamers’ brand memory and attitude can be inspected in future research studies.

6.7. Theoretical and Managerial Implications

Regardless of the limitations, the present essay augments to the marketing gen from attention, elaboration and persuasion perspectives, about designing effective advergames for young consumers by considering the peculiar individualities of each advergame. From a theoretical point of view, this study donates to the works of non-traditional advertising media, especially to the advergaming context, by inspecting the advergaming impact of nature of game and understanding how game-product congruence influences the effect of nature of game on customers’ brand memory and brand attitude.
The current study highlights that gamers’ brand memory does get affected by nature of the advergames and game-product congruence. Brand recall is higher for a slow-paced advergame than a fast-paced advergame as gamers playing slow-paced advergames require less mental capacity to play the game and hence, remain with more spare capacity needed for processing in-game advertising resulting in higher recall unlike fast-game players. Furthermore, the findings indicate that brand recall is high in case of a slow-paced advergame with low game-product congruence than a slow-paced advergame with high game-product congruence. On the other hand, for fast paced advergames, there is no significant difference between low- and high-congruence. Today media planners look for those marketing strategies which can grab the attention of the young consumers in a second. Incongruity between the advertised product and the content of the media is one of these marketing strategies which have been widely used by media planners today. Thus, this essay’s findings prove to be very important for advertising specialists. As today’s advertisers’ primary goal is to create more brand awareness and recall among youth, thus, high-incongruent brand placements could be considered as a superior media approach for in-game advertising than low-incongruent brand placements. Also, a slow-paced advergame can be a better choice for an effective media strategy than a fast-paced advergame.

Further, this essay shows that young gamers’ persuasion knowledge could be another important factor which affects their recall and attitude. The findings show that in case of slow-paced advergames with low game-product congruence, gamers with high persuasion knowledge result in higher brand recall but less favorable brand attitude than gamers with low persuasion knowledge. The logic behind this finding is that a gamer with high persuasion knowledge is more curious to know the reason behind placing an incongruent-brand in a slow-game which increases the cognitive elaboration and this increased elaboration leads to high brand recall and
less favorable brand attitude. Also, it is generally assumed that increasing persuasion knowledge leads to more critical processing of advertising, therefore, advertising managers should also consider the persuasion knowledge factor while designing advergames for youth so that the application has the sturdiest positive influence on young consumers’ brand recall and brand attitude. Furthermore, in our study, we made use of fictitious brands to avoid the biased effects which might have emerged in the study due to familiarity with real brands. Even this point has a very important implication for managers, i.e., advergames can be very useful and effective in creating brand awareness among Indian gamers even for those brands that do not exist in the Indian market place yet. Moreover, advergames have the basic springiness supported by the technology to tailor and change the in-game brand placements for different market segments, which can increase their efficacy and usefulness. This gives advertisers and game designers an opportunity to match the in-game brand placements with the target segment’s demographic and cultural characteristics such that, gamers in different sections would see apposite brand placements.

Other than various theoretical and managerial implications, the study has some serious implications for policy makers and ad-regulators too. Regarding the issue of controlling the ad-content on different media, it is comparatively easy to regulate the content of TV box and print advertising than monitoring the content of online advertising and advergames (Carlsson, 2006). Also, the worldwide reach of the internet poses a big question in front of ad-regulators that how they can regulate online advertising. As evident from the literature (Wright et al., 2005), persuasion source identification and the knowledge of persuasive intent are very much required to effectively deal with marketing communications. But young consumers devoid of this knowledge cannot develop cognitive defense strategies, such as counter arguing strategy to deal
with marketplace persuasion (Friestad and Wright 1994). Since, the ultimate goal of advertising policy makers is to create a fair, strong and robust advertising media atmosphere (Mallinckrodt and Mizerski, 2007); hence they must have enough knowledge about the advertising aspects of online advertising media that triggers young consumers’ persuasion knowledge. Perhaps, the policy makers can consider certain strategies, such as inclusion of ad-breaks or bumpers in the game that will provide media literacy about advergames to the young consumers that advergames are more than just “an entertaining game”. Hence, our study will be very beneficial for advertising policy makers as well as advertising regulators in attaining their goal of creating an unbiased and healthy advertising media environment.