

« WHEN RAMON TAFRAISE CRUSHES THE DOODLER! »: THE
IMPACT OF BRAND PROMINENCE ON THE EFFECTIVENESS
OF AN ADVERGAME BEFORE PLAYING

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Abstract: This study focuses on the effects of game-brand congruence and brand prominence within an advergame before playing. A 2 (congruence) x 2 (prominence) between-subject experiment shows that when the game and the brand are congruent, attitude toward the game and intention to download the game are improved when the brand is prominent. No effect of brand prominence is found in the incongruent condition. To activate the promotional goal of an advergame, these findings suggest to advergame designers to choose games related to their brand and to make the brand central into the gameplay.

Keywords: advergames, congruence, prominence, gamification, online communication.

Track : Advertising & Marketing Communications

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1. Introduction

In 2010, *Ramon Tafraise* and *Mangue Debol* were fighting for becoming “the fruit of the year” for *Oasis* beverage brand. In « La Chuuute » -- the fall --, a free application created by the brand, players had to avoid pitfalls and led their totem-fruit to the summit of a giant waterfall. The game had a huge success on its release: this application had more than 85 million of game parts in less than a year. At its origin, this game is a simple adaptation by Oasis of a very successful videogame in the same era: *Doodle Jump*. Our research questions the player interest of downloading a videogame adapted by a brand rather than the original videogame that inspired it. Whereas those videogames are most of the time downloaded for free, why do equivalent advertised videogames reach as much or even more consumer’ interest?

Brands integrate more and more gaming levers within their marketing actions (Poncin and al., 2017). When a brand uses a videogame especially created as an advertising, where the brand universe is enacted thanks to traditional gaming forms, this videogame is called adverggame (Kretchmer, 2004). In a gaming context, the user is not passive since the game is interactive by essence : the cognitive and motor needs required to play are not the same than those when watching movies or TV programs. This leads users to be more attentive to the claimed message (Nicovich, 2005). This new type of *branded entertainment*, (Hudson and Hudson, 2006), has known a quick success since adverggames attract kids, teens, and young adults which opt more and more for online interactive medias instead of more traditionnal type of media when they seek for distraction (ESA 2018). Because of their format, the more often small arcade games or puzzles (Lee and Youn, 2008), adverggames are quite simple to design and to diffuse, especially via applications or websites (Cauberghe and De Pelsmacker, 2010). Associating game mechanisms and mobile technology increases, among others, purchase intention (Hofacker, 2016). Indeed, those particularities made adverggames a very adapted advertising support for Y generation, as the bigger part of game and mobile technologies users (Zickuhr, 2010).

Previous litterature focuses on adverggame characteristics which impact *a posteriori* adverggame efficacy (after playing). Conclusions adressed to brands are contradictory (Terlutter and Capella, 2013) and results vary along different game characteristics combinations (Peters and Leshner, 2013). Nevertheless, adverggames are found to be more effective to promote new product testing (Kinard et Hartman, 2013) or to promote unknown brands (Mau *et al.*, 2008). In this research, we propose to consider the question of *a priori* adverggame efficacy (before playing): indeed, the main challenge for the advertiser is first that the target activates the adverggame and its execution cues have to serve this goal. In the present research, we consider the impact of the dynamic between the brand and the game via the integration level of the brand in the game – brand prominence – and via the congruence between the brand and the game on the target behavior toward the brand and the game thanks to an experiment. Our results provide insights for adverggame designers aiming at promoting their brands with this strategy.

2. Brand-Game Congruence and Brand Prominence in adverggames impact on their efficacy

Our research deals with adverggames which distinguish from simple product or brand placement in an existing videogame named « in-game advertising » (IGA). IGA consists in the inclusion of products of a brand in a game, whose main purpose still entertainment, the

same way than product or brand placement in movies (Yang et al., 2006). The advergame main purpose, before entertainment, is *advertisement*: the brand is integrated in the game that make the game itself the brand message (Peters and Leshner, 2013). Advergame is then at the interface between game and advertising. This is the reason why we propose that this advertising practice should question targeted consumers regarding to the legitimacy of the presence of the brand in the universe of the game and then impact attitude toward the brand and the game. To understand this process, the way the brand is integrated in the game and the brand-game congruence are mobilized in this research.

2.1. *The legitimacy for the brand to use the game*

To benefit to the brand, advertising practice has to be legitimate for targeted consumers (Capelli and Sabadie, 2005) to avoid advertising resistance phenomenon potentially arising when targets identify a profit purpose associated with the use of a practice usually dedicated to the non-for-profit sector.

2.2. *Brand prominence in advergames*

When a brand develops a *branded entertainment*, it has to figure out with the choice about the centrality of its presence with the entertainment experience as it is the case for all brand or product placements (d'Astous and Chartier, 2000; Schneider and Cornwell, 2005). In the case of an advergame, the targeted consumer' participation to the branded game fits precisely with the situation so called *Collaborative Branded Entertainment* (Capelli et al., 2016) since the target and the game interact around the brand. This situation where the brand is at the core of the artistic creation – here the game – is more favorable to the brand than the simple placement: the more the brand is prominent and the better the attitude toward the brand. Brand prominence in a videogame is defined as its visibility level in terms of size or position and its centrality within action (Gupta and Lord, 1998). More generally, according to PKM -- *Persuasion Knowledge Model* – when a consumer identifies a message as a promotion tool, he or she see the *advertisement* with a more critical eye and resists to persuasion attempts (Friestad and Wright, 1994). A prominent placement in a videogame should make profit intent more obvious (Campbell and Kirmani, 2000) and this awareness of the product placement should generate more negative attitudes toward the brand (Van Reijmersdal, 2009). On the contrary, in the case of an advergame, the resistance to persuasion attempt described in PKM is avoid since the main goal of the game– *advertisement* – is clearly disclosed to the consumer, who is immediately aware of the brand commercial intent when he or she chooses to play the game, whatever the brand prominence in the game (Cauberghe and De Pelsmacker, 2010). In an advergame, the brand assumes its presence and its advertising process is then explicit, contrary to what is happening for product or brand placement in a traditional videogame with IGA. Opposite to what happens for IGA, we propose that brand prominence in an advergame should make this advergame more legitimate as a marketing practice and then benefit to both the brand and the game.

2.3. *Brand-game congruence*

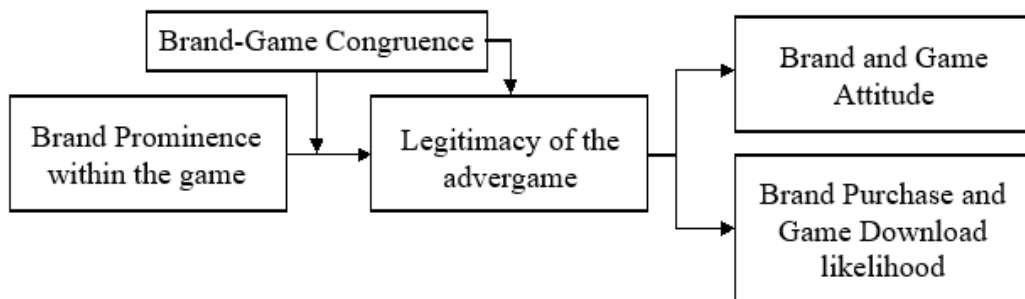
As it is the case for every association between an artistic creation and a brand, perceived congruence between the game and the brand should impact the way the targeted consumers perceive this association (Stangor and Macmillan, 1992), but this impact should depend on the considered moment: before or after playing the game. On the one hand, when the targeted consumers play the advergame, brand-game congruence enhances pleasure of playing, brand recall and attitude toward the brand (Peters and Leshner, 2013) this effect being explained by an attitude transfer between the game and the brand (Wise et al., 2008). If this congruence

benefits to the brand, it decreases attitude toward the game (Gross, 2010). On the other hand, when the targeted consumers have not yet played the advergaming, they should process brand-game congruence as the same kind of information than the one conveyed by a classical sponsorship. If the brand-game congruence is low, brand prominence in the advergaming won't be relevant and then have no effect on targeted consumer's behavior. Conversely, if the brand-game congruence is high, the positive effect of brand prominence as described below should manifest itself. Therefore, we propose that brand-game congruence moderates the positive relationship between brand prominence and targeted consumer's behavior such that:

H1. In the case where brand-game congruence is high, the more the brand is prominent within the advergaming, and the more legitimate the advergaming, which increases in turn (a) attitude toward the brand, (b) brand buying intent, (c) attitude toward the game, and (d) intent to download the game.

H2. In the case where brand-game congruence is low, brand prominence within the advergaming does not impact targeted consumer's attitudes and intents toward the brand and the game.

Figure 1 : Research Model



3. Research Method

In order to test our research hypothesis, we ran a between-subject experiment manipulating two factors: brand prominence within the advergaming (low vs high) × brand-game congruence (low vs high) for a French advergaming.

3.1. Stimuli

So as to investigate the brand-game congruence, we have to use stimuli benefiting from an established awareness. We then have chosen *Milka* chocolate brand due to its very high awareness score on the French market and two high awareness videogames available via applications and allowing the manipulation of brand prominence: *Candy Crush* (more than 3 billion downloads) and *Minecraft* (around 22 million downloads). *Candy Crush*, videogame enacting candies, is considered as the congruent condition with *Milka* brand whereas *Minecraft*, videogame enacting mining goblins, represents our non-congruent condition. For each game, a version varying the brand prominence, via its centrality, has been designed; some graphic cues of the existing game have been modified but the design and the gameplay still the same than in the original videogame (cf. annex 1): *Milkrush* for *Candy Crush* and *Milkraft* for *Minecraft*.

3.2. Measures

Dependent variables – DV -- were assessed thanks to existing scales. Product of the brand buying intent and game downloading intent were measured on a probability scale (Juster 1966). Attitudes toward the brand and the game were measured thanks to 7 points Likert-scales. Mediator variable, advergaming legitimacy, was measure via a 7-point Likert scale (Capelli et Sabadie, 2005). All items are detailed in annex 2. Prior brand awareness and prior attitudes

toward the games and the brand, chocolate consumption and videogame playing intensity have been assessed at the beginning of the questionnaire so as to control their effects.

3.3. Sample and procedure

266 students of a French university ($M_{age} = 21.22$ years $SD = 1.11$, %female = 67%) have been sampled for this research. They perceived a gift card of 5 euros as incentive to participate. Each respondent answered first for the control variables, he or she was then randomly exposed to one of the four scenarios and was asked to answer the questions dedicated to the DV and mediator at the end of the questionnaire.

4. Results

In a first step the quality of measurement have been verified thanks to a factorial analysis (see annex 2). Brand-game congruence manipulation has been checked: perceived congruence is significantly lower in the low brand-game congruence condition ($M_{low_congruence} = 2.64$) compared to the high brand-game congruence condition ($M_{high_congruence} = 4.20$; $p < .001$). Data were analyzed via a mediation moderated regression model (model 8 recommended by Preacher and Hayes, 2018). In the first model, brand prominence in the advergaming (high brand prominence coded 0, low prominence coded 1) is integrated as dependent variable, advergaming legitimacy as mediator, brand-game congruence (low congruence coded 0, high congruence coded 1) as moderator and attitude toward the brand as dependent variable. Analysis ran next replicate the same model modifying solely the dependent variable, successively brand product buying intent, attitude toward the game and game download intent. Control variables were integrated as covariates.

Table 1: Mediated moderated analysis results for attitude toward the game and download probability

Y1 = attitude toward the game Y2 = game download probability	Path A X → M			Path B X → Y1.M			Path B X → Y2.M		
	β	IC 95%		β	IC 95%		β	IC 95%	
		upper	lower		upper	lower		upper	lower
Advergaming legitimacy				.96*	.02	.17	2.70*	.09	5.31
Brand prominence	.87*	.02	1.72	-.07	-.58	.44	4.02	-14.08	22.11
Brand-game congruence	2.06*	1.09	3.04	.07	-.53	.67	9.26	-12.02	30.55
Brand prominence × Brand-game congruence	-.68*	-1.29	-.08	.06	-.30	.43	-2.99	-15.89	9.91
Use of the game	.02	-.06	.11	.04	-.01	.09	3.36*	1.61	5.11
Game awareness	.81*	.27	1.35	.02	-.30	.35	6.51	-5.08	18.09
Prior attitude/game	-.05	-.16	.07	.84*	.77	.91	4.76*	2.37	6.11
Index of partial moderated mediation for Y1	-0.07 95% CI: [-.19 ; -.004] excluding 0								
Index of partial moderated mediation for Y2	-1.85 95% CI: [-5.41 ; -.08] excluding 0								

Path A = relationship between IV and mediator

Path B = direct effect of IV on DV controlling for mediator

Number of bootstrap samples for bias corrected bootstrap confidence intervals: 5000.

4.1. Advergaming impact on brand

Analysis fail to emphasize 5 percent significant effects for the mediated moderated regression models when attitude toward the brand and likelihood to buy brand products are integrated as DV. Consequently, whatever the level of brand-game congruence, brand prominence within the advergaming is without effect, that lead us to reject H1a and H1b to validate H2.

4.2. Advergame impact on game

Analysis highlight significant results when attitude toward the game ($R^2=0.20$; $p<.001$) and likelihood to download the game ($R^2=.20$; $p<.001$) are integrated as dependent variables (cf. table1). Moreover, brand prominence and brand-game congruence interact to explain attitude toward the game and probability to download the game via advergame legitimacy (Index of partial moderated mediation $n_{attitude_game} = -0.7$; 95% CI [-.19 ; -.004] excluding 0 ; Index of partial moderated mediation $n_{download_probability} = -1.85$ 95%CI [-5.41 ; -.08] excluding 0) validating H1c and H1d. When the brand and the game are highly congruent, advergame legitimacy is enhanced in the case where the brand is prominent vs. non prominent ($M_{legitimacy_high_prominence} = 4.58$, $M_{legitimacy_low_prominence} = 4.03$; $F=5.32$; $p=.024$). When the brand and the game are weakly congruent, this effect is not significant validating H2.

5. Contributions, Limitations and Future Research

5.1. Academic contributions

Our research results show that advergames are an efficient lever as far as intent to download and is concerned, even when the brand and the game benefit from a high awareness whereas previous researches advocate in favor for their use as a promoting tool to increase awareness of unknown products or brands (Kinard and Hartman, 2013 ; Mau, et al., 2008). Moreover, past researches focus on advergame efficacy *after playing the game* considering brand recall, attitude toward the brand, brand memorization, pleasure to play and intent to play in the future (Cauberghe and De Pelsmacker, 2010 ; Gross, 2010 ; Peters and Leshner, 2013). Our research provides complementary highlights about impact of advergame execution cues *before playing the game*, since mechanisms at play are not the same depending on the fact targeted consumers have payer or not.

5.2. Contributions for practitioners

Our results inform practitioners about the more effective way to design advergames taking into account its effect produced before its use. Our research advises managers to make their brands prominent in advergames instead of limiting their partnership with an existing game to a simple commercial agreement. Execution effort developed in this case is appreciated by targeted consumers which in turn tend to more download the game, serving in fine the advertising campaign. On the contrary, this prominence may disturb player experience and decrease attitude toward the brand after playing the game (Kinard and Hartman, 2013).

5.3. Limitations and future research

We manipulated solely one dimension of prominence (brand centrality) and future research should investigate others dimensions such as size and position of the brand. Individual gamer characteristics have not been integrated to the present research and a single gaming modality has been selected to insure internal validity. However, the combination of several modalities could refine our results (Peters and Leshner, 2013). Moreover, additional researches dealing with the game type may detail the present results, for instance, in assessing the impact of competitive versus cooperative advergames (Leclercq et al., 2018) or the impact of the game type (Apperley, 2006) on advergame legitimacy. Our research integrates a brand and two similar games and those choices question external validity of the results for other videogame types such as race or sport videogames on which previous placement researches tend to focus (Sung and De Gregorio, 2008). Finally, using gaming mechanism within marketing practices does not insure success (Poncin et al., 2018). A comparison between an advergame campaign and a classical promotional offer campaign in terms of their efficacy (their actual clic rate for instance) would be of a great interest.

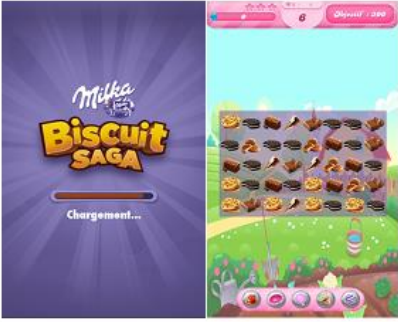
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Annex 1: Experimental Material

Each respondent read the following text: “Special offer from the brand Milka! For one Milka product buy, you will receive a code to download (benefit related to the scenario) on the device you want!” before being randomly exposed to one of the following condition:

	High Congruence	Low Congruence
High Prominence		
Low Prominence		

Annex 2: Measurement scales used in this research

Item	Standardised coefficient
<i>Brand attitude before the offer ($\alpha = .94$)</i>	
About this brand...	
• I like this brand	.947
• This brand is a good brand	.914
• This brand appeals to me	.957
<i>Brand attitude after the offer ($\alpha = .94$)</i>	
Following this offer...	
• I like this brand	.939
• This brand is a good brand	.936
• This brand appeals to me	.951
<i>Game attitude before the offer ($\alpha = .92$)</i>	
About this game...	
• I like this game	.955
• This game is a good game	.858
• This game appeals to me	.957
<i>Game attitude after the offer ($\alpha = .92$)</i>	
Following this offer...	
• I like this game	.953
• This game is a good game	.866
• This game appeals to me	.958
<i>Brand legitimacy to offer the game ($\alpha = .82$)</i>	
According to you, the association between the brand and the game is:	
• Logical	.854
• Consistent	.850
• Normal	.812
• Acceptable	.696
<i>Brand-Game Congruence ($\alpha = .92$)</i>	
• This game/brand association is relevant	.943
• The brand fit well with the game	.918
• This game/brand association makes sense	.934