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ADAPTING MOTION PICTURES FROM VIDEO GAMES SUCCESSFULLY: THE ROLE OF GAME CREATOR INVOLVEMENT AND GAME-MOVIE FIT

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INTRODUCTION

A widely implemented strategy among risk-averse investors in the entertainment industry is to launch concepts through multiple media like game, film, novel, animated movie, merchandise and other in order to leverage existing creative equity and capitalize on marketing expenditures (Aarseth, 2006). A notable example is "Hollywood" or the American motion picture business, where movies have been continuously adapted from other sources such as novels, comics, games, etc. This is not surprising, having in mind the significant investment required for producing a motion picture and the risk that the returns may not be sufficient (Aarseth, 2006) (Eliashberg, et al., 2006). In 2003, the average production cost of a motion pictures in Hollywood, including the marketing expenditures, accounted for $103 million (Alpert & Jacobs, 2004). Whether the movie is successful is determined by the amount of revenue it generates in the box office (Eliashberg, et al., 2006). Often movies fail to generate enough interest in the cinema and their box-office earnings remains below their production costs (budget), leaving producers at a loss (such unsuccessful movies are often called box-office "flops"). A simple way to increase the chances for box office success is to bring an already well-known intellectual property to the big screen. This allows film producers to take advantage of the already existing awareness of the original content among the audience and market the movie less costly and more effective. (Lampel & Shamsie, 2000).

Joshi and Mao (2010) study more than 700 movies and confirm that motion pictures adapted from successful books generate higher revenues than those, relying on original screenplays. They suggest that the reason lies in the equity of the original work (in the case of their study, a novel) which serves as a que for the quality of the movie and drives tickets purchases, especially in the opening weekend of the box office, when other available information for the film is limited (Joshi & Mao, 2010). This is in line with Aarseth (2016) who points out that when adapting a work into another medium, it is important that the initial concept was already successful or in other words, has valuable equity.

Movies adapted from books is what Aarseth defines as a typical content migration in which a work originated in a low-cost media such as a novel, comic or a play and was later adapted to a high-cost one such as a motion picture. Moreover, books and films share similar narrative which eases content migration between the two (Ip, 2011). Aarseth points out that content transfer doesn't

happen as smoothly between all media and not all adaptations are successful. One challenging case in which motion pictures leverage equity from another high-cost source with very different "cognitive and social affordances" are video game adaptations (Aarseth, 2006). Unlike movies, games adopt an interactive storytelling, allowing the audience to feel part of the narrative (Ip, 2011). At the same time, games do not have the same spatial and temporal flexibilities as movies (Brown & Krzywinska, 2009). Therefore, content transfer between the two does not happen as effortlessly as it does between novels and movies (Aarseth, 2006). For example, Aarseth suggests that an element such as storyline which is easily adapted from a book into a movie, is hard to transition from game to movie (Aarseth, 2006). This creates problems for movie producers who, according to Paul Dergarabedian, senior media analyst at Comscore, still haven't cracked the formula how to turn video game adaptations into a blockbuster genre (MacDonald, 2018).

THE CASE OF GAME-BASED MOVIES

To begin with, movies based on video games are much rarer than other types of adaptations. While over 2000 movies based on fiction novels and short stories have been produced since 1995 according to The Numbers (Anon., 2018), there have been less than 100 films adapted from games during the same period (The Numbers, 2018). The three highest-grossing game-based movies of all times are adaptations of well-known game equities such as Lara Croft: Tomb Raider (2001), Mortal Kombat (1995) and The Angry Birds Movie (2016) (The Numbers, 2018). However, Gergarabedian hints that games adaptations lack consistency when it comes to producing hits and probably have the most varied box office among all genres, as "for every Lara Croft: Tomb Raider and The Angry Birds Movie, there have been numerous big-budget flops" (MacDonald, 2018). Among those flops are movie adaptations of beloved video game franchises with an impressive fan base such as Super Mario, Final Fantasy, Doom, Bloodrayne, Alone in the Dark (Rufus & Shanley, 2017). The film Super Mario Bros. (1993) generated only $20.9 million box-office revenues compared to its $48 million production budget, while the adaptation "Final Fantasy: The Spirits Within" resulted in the loss of almost 105 million dollars (Anon., 2017). While the value of the original equity is the most influential factor for the box office performance of a book adaptation according to Joshi and Mao (2010), the case of these game-based flops seems more complicated since despite adapting famous game content, they still failed to attract sufficient amount of interest

in the cinema. While there are many factors that can influence the financial performance of a movie (production budget, number of opening screens, participation of stars and whether it's a sequel or not) (Walls 2009, De Vany, A. & Walls, W.D. 1999), it is worth considering the possibility that leveraging game equity presents movie makers with more challenges compared to other sources such as novels. Therefore, there is a need to research what factors influence the performance of such type of cross-media productions in box office terms and come up with strategy that ehances their odds for success.

PROBLEM STATEMENT AND RESEARCH OBJECTIVES

In an interview for the media GameSpot, movie industry insiders Roy Lee, producer of the films "The Lego Movie" and "The Departed", and Adrian Askarieh, the producer behind the badly received game adaptation "Hitman: Agent 47", discuss how success of game adaptations lies in creating a movie that will not only appeal to the wide audience, but will also be approved by original fans of the franchise at the same time (Makuch, 2016). This is in line with Aarseth (2006) who suggests that when content is transferred from ones source to another, the audience familiar with the original content has already some expectations from the new product and its success depends on whether they are fulfilled. Moreover, Aarseth argues that the health of the entire cross-media franchise "brand" depends on how fans perceive the new product and if they accept it. Applying this to the context of game adaptations for the big screen, movie makers should strive to satisfy the expectations of the original players and fans of the video game who are already aware of its content. Considering that video games have been challenging movies in terms of popularity, generating equally high or even higher worldwide revenue than the motion picture industry, it is even more crucial for movie makers to successfully target the constantly growing game audience. In 2017, video games for PC and consoles generated $41.2 bn. revenue worldwide (excluding the mobile games which accounted for another $59.2 bn.) (Batchelor, 2018), while the global box office revenue accounted for $40.6 bn. (Statista, 2018). According to data analysts, in 2018 the video game industry is growing faster than the motion picture one, taking market share from other form of media such as movies and TV (Ell, 2018).

While, clearly, winning video game fans' approval of a movie extension can be crucial for its box office performance in the short term and for the health of the franchise brand in the long term (Aarseth, 2006; Joshi & Mao, 2010), this turns out to be a complex task. The reason is that games

undergo a series of changes in the process of adaptation to the big screen and fans are often not fond of them, perceiving the movie as a “rip-off” of the original IP (Makuch, 2016). In 2016 the online source Vocativ analyzed fan reviews of sixty-nine silver screen movie adaptations of video games posted on the website IMDB since 1986 and found out that 98% of the time the movies have received considerably worse reviews than their game source (Byrne & Kelly, 2016). A peak at some negative fan reviews on the website Metacritic for a pair of not-well-received movies depicting the beloved video games “Doom” and “Hitman” reveal some sources of dissatisfaction among the audience and more specifically among the game fans, providing potential reasons why game-based movies may not perform well. While the fans of the Hitman franchise criticize the film “Hitman: Agent 47” (2015) for not being able to capture and convey the essence of “stealth” that they perceive fundamental for the game (Appendix 1), the Doom fans complain that the movie story in “Doom” (2005) is “not even close” to the original and the whole film is “nothing like” its source, raging against the replacement of the hell demons with alien ones (Appendix 2) (Anon., 2017). Furthermore, some of the negative comments include critics of the quality of the experience delivered by the movie compared to the game and accusations towards the movie studios for creating a “rip-off” of their favorite franchise with the sole purpose of earning money. Fan reviews like these provide important insights on how game-to-movie adaptations are evaluated. It seems that for those already familiar with the game it is of great importance that the movie depicts its content plausibly. On the one hand, this means that fundamental narrative elements making up “what the game is all about” should be present in the movie. On the other hand, the audience expect that the quality of the movie keeps up with the one of the original medium – the game is good and therefore, the movie should also be good.

Both Lee and Askarieh agree that a way to increase the chance that original game fans like the movie based on their favorite game, is to involve "the original IP holder in the creation of the movie itself” as a way to ensure everything appealing to “the core gamer” will be present in the film, while at the same time “help the fans of the franchise accept the changes that are required for adapting the game into a movie" (Makuch, 2016). This means that for the audience, familiar with the franchise, an extension of its content to such different category as motion pictures may be perceived credible as long as it comes from the original creator. This strategy has been already

proven successful by the entertainment giant Marvel who started as a publisher of superhero comic books, but later turned their characters and stories into popular franchises, by extending them into games, animations (Marvel Animation), movies (Marvel Studios) and television series (Marvel Television). Marvel became a household name that is inseparable from its intellectual property, no matter which medium it travels to. The result is a series of movies, well accepted by the public evident by the cumulative worldwide box office of all 15 Marvel Cinematic Universe movies since 2008 accounts for over 11 billion dollars (Box Office Mojo, 2017). Furthermore, industry practice shows that involvement of the creator of the original equity in its extension to new category can also help the original fans evaluate the new product well even when there have been changes in the original content. A suitable example how extending a story not only to new mediums but with new content can be justified by the original fans is the popular franchise Game of Thrones. The HBO television series began in 2010 as an adaptation of George R. R Martin's book series "Song of Ice and Fire" but took on a life of its own by premiering two seasons not based on any novel content. The show keeps receiving huge fan support despite no longer adapting a storyline from the books. The ability to be flexible in terms of content and yet not diluting the original book brand in the eyes of the fans is to large extend due to the active participation of the books author George R. R Martin. His role of co-executive producer of the series, as well as his writing of scripts for episodes and possible future spin-offs, is constantly communicated to the audience, providing credibility of any product coming from the Game of Thrones brand. Therefore, in the case of game-based movies, the original fans of a game may form a more positive view towards its extension to a motion picture if they perceive that the original game creator[1] is involved in its production. The participation of

[1]Two entities are directly involved in the creation of video games and the ownership of their intellectual property. First are the game developers, who are the designers, programmers and artists, participating in the actual creation of a video game (Learn.org, 2018). The other important entity are the game publishers. These are companies who support the development of video games through financing, marketing and managing all business activities surrounding the release of a game **Invalid source specified.**. The types of relationships between developers and publishers constitute a spectrum. On one if its ends developers can create and produce a game independently, retaining complete ownership of the IP rights. On the other end of the spectrum they can work for a game publishing studio which owns the IP of everything they create (Campbell, 2011). In between are all types of co-ownership of the IP. For the purpose of our study, we will regard as a "game creator" the entity which owns the IP rights for the game, including both developers and/or publishers.

the original creator signals that the new movie is a credible extension to the beloved game, helping the audience to evaluate it better and consequently, improve the odds for its success.

Summing up, a way to ensure that game adaptations do not end up box-office flops, is to get on board the original audience of the equity and target them successfully with the new product. This means that the game content has to be plausibly depicted by the movie and the adaptation itself should by perceived as a credible extension of the original equity. Considering all this, the aim of the current paper is to shed more light on how the original audience of the game evaluate its movie adaptation in the presence of two factors: content fit between game and movie and the participation of the game creator in its production. The research questions which my paper will answer are:

Do changes in the original content of the game affect the evaluation of the movie adaptation negatively among the audience familiar with the franchise?

Are movies adapted from games evaluated better by the original game fans when they come from the game makers?

Does the effect of game-movie fit on fans' evaluation of the movie depends on whether the original game creator is making the movie?

For entities engaged in movie production my study will clarify the importance of proper content transfer when leveraging game equity, along with involving the original IP holders in the film-making process and communicating their participation to the audience. For the game creators, the current paper will provide insights on how to manage extensions of their IP to different categories such as movies and give evidence that they provide credibility to movie adaptations from their games in the eyes of the original fan audience.

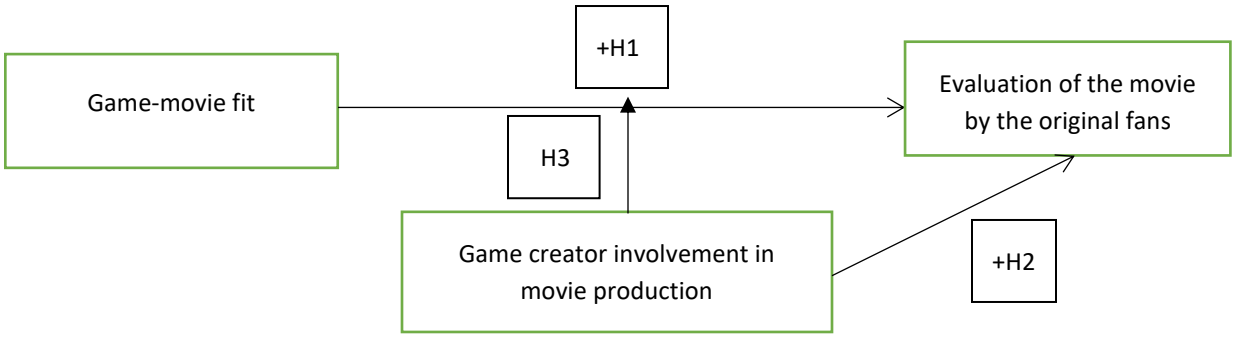
In academic terms, my thesis contributes to marketing literature and more precisely, to brand extension research in the context of experiential goods. While a series of notable studies (Sood and Drèze, 2006; Basuroy and Chatterjee, 2008; Hennig-Thurau et al., 2009; Joshi and Mao, 2010; Knapp et al., 2014; Bohnenkamp et al., 2014) have applied brand extension theory to examine experiential extensions such as novel adaptations, movie sequels and remakes, my paper is the first to do so in the case of movies adapted from games.

A limitation of my study is that I use imaginary movies to conduct an experiment and answer my research questions. Therefore, the respondents' perceptions towards these imaginary movies are largely influenced by current practices in the cinema industry. If movie producers acted according to the insights provided in my study, participant's reaction may have been different.

LITERATURE REVIEW AND HYPOTHESIS

Conceptual Framework

My conceptual framework I adopt for my study predicts that each of the two factors - game-movie fit and the role of the game creator in the movie production will have a positive main effect on the evaluation of the extension by the audience familiar with the original content. Moreover, I expect that the strength with which game-movie fit influences the evaluation of the extension will be moderated by whether the game-creator is involved in the movie production or not. In the next paragraphs, I review findings of previous academic research in the field of brand extensions and develop my hypothesis on the basis of it.



THE ROLE OF FIT IN THE EVALUATION OF EXPERIENTIAL BRAND EXTENSIONS

Several authors have examined movie sequels, adaptations and remakes as brand extensions in an experiential context (Sood and Drèze, 2006; Basuroy and Chatterjee, 2008; Hennig-Thurau et al., 2009; Joshi and Mao, 2010; Knapp et al., 2013; Bohnenkamp et al., 2014). In line with previous brand extension research, the most important factors influencing the

evaluation of experiential extensions are the parent brand equity and the fit between the parent and the extension (Sood and Drèze, 2006; Basuroy and Chatterjee, 2008; Hennig-Thurau et al., 2009; Bohnenkamp et al., 2014; Joshi and Mao, 2010). While studies are unanimous about the positive effect of parent brand equity on the performance of the extension (with the exception of the study of Bohnenkamp et al., 2014 on remakes), research on the effect of fit in the case of experiential attributes renders ambiguous results.

Academic research has regarded fit (or similarity) between parent brand and its extension as the extent to which "consumer perceives the new item to be consistent with the parent brand" (Tauber, 1980) (Aaker & Keller, 1990). The importance of parent-extension fit for the acceptance of the latter has been well-documented by many academic studies (Aaker& Keller, 1990; Boush & Loken, 1991; Park et al., 1991; Broniarczyk & Alba, 1994; Völckner & Sattler, 2006; Sood and Drèze, 2006). The explanation lies within the categorization theory according to which a brand can be seen as a category in memory in which people store knowledge and attitudes (Fiske and Pavelchak, 1986). When they detect a high degree of similarity between a brand they like and its extension, consumers will transfer their positive perception of the parent brand category to the new extension (Aaker& Keller, 1990; Boush & Loken, 1991; Park et al., 1991). Keller and Aaker (1990) found that parent brand associations such as quality do not influence the attitude towards the extension directly – they only have impact when there is a sufficient fit between the two. Moreover, fit has a substantial direct positive effect, meaning that similar to the parent brand extensions are always evaluated higher than non-similar extensions. Park et al (1991) make a notable contribution to the work of Aaker and Keller (1990) and Boush and Loken (1991) by stretching the notion of similarity beyond a mere overlap of features between two categories. The authors show that an extension can be perceived as similar to its parent if it accommodates the same concept – functional or prestige. They find that that fit not only influences brand extension evaluation but it is also a function of both product-feature similarity and brand-concept consistency perceptions.

Sood and Drèze (2006) demonstrate how the traditional categorization model is reversed in the case of experiential product extensions such as movie sequels and high similarity has a negative effect on the evaluations of the new product. The authors define similarity as an overlap of experiential attributes such as genre and they further prove that instead of positive, similarity between an original movie and its sequel has a negative effect on the evaluation of the sequel. The

reason is that people tend to satiate on experiential attributes and seek for novelty (Hirschman and Holbrook, 1982). Basuroy and Chatterjee (2008) argue that if satiation occurs in the case of movie sequels, their weekly box office would drop faster than that of non-sequels. Their study shows that although movie sequels attract more box office revenues due to consumer interest in the opening week, their weekly performance decrease more rapidly in line with the satiation effect and Sood and Dreze's results.

Hennig-Thurau et al. (2009) also investigate movie sequels from the perspective of brand extension theory and creates a model for measuring the monetary value of such extension. One of the drivers of brand extension success integrated in the model is the fit between the original movie and the sequel. The authors use 11 fit variables that reflect the consistency between parent and extension product on key elements like stars, genre, budget, rating, and title. The study shows that the familiar stars increase the brand awareness effect on the evaluation of the sequel, while the image of the franchise is more strongly pronounced when the sequel and the parent are of the same genre.

Yalcinkaya and Aktekin (2015) also examine movie sequels as experiential brand extensions and adopt the perspective of the signaling theory to identify a number of core product attributes that influence the sequels performance measured by their box office revenue. An important outcome is that continuity of parent product attributes (such as title, director and stars) is a key quality signal for consumers, especially when it comes to the title of the franchise. Contrary to the findings of Sood and Dreze (2006) that dissimilar brand extensions of experiential products are rated higher, Yalcinkaya and Aktekin (2015) show that sequels emphasizing their relation to the parent movie by having numbered titles perform better than those who have chosen not to keep the same title and use a naming strategy. The authors argue that a descriptive rather than numbered title of a sequel implies the inclusion of a different story line and therefore is not perceived by customers as a continuation of the parent product.

Joshi and Mao (2010) are one of the few notable examples that use brand extension literature to examine cross-media productions such as movies adapted from a books. They explore what affects the performance of book-based movies both in the opening weekend and after that and find out that book equity is the most important driver for the success of such adaptation, impacting the performance of the movie in both periods. Moreover, the study compares movie adaptations to movie sequels and draws important differences between the two types of extensions. While parent-

extension similarity in terms of content has a positive effect on the evaluation of a book-based movie, it does not influences the performance of a movie sequel. The underlying reason is that change in experiential modality (from book to movie) eliminates the satiation effects which are in action when the modality remains the same (movie sequels). Therefore, high book-movie similarity plays a crucial role in the evaluation of the adaptation during the opening weekend by significantly increasing the effect of book equity. The reason is the increased parent brand (book) diagnosticity in the evaluation of the extension (movie), facilitating the transfer of positive associations held for the book to the movie. Although content similarity in the case of movie sequels can also increase the transfer of associations from the original to the extension movie, its positive effect on the evaluation of the sequels is neutralized by the negative effect of satiation with familiar experiential elements such as genre which occurs simultaneously.

Just like in Joshi and Mao's study, the current paper will examine a hedonic extension that involves change in the medium – a movie adapted from video game. In line with Josi and Mao's results for book-based movies, I expect that when a game adaptation is very similar to the original source, satiation will not occur due to the change in the experiential modality. Just as the categorization theory suggests, the fit between the game and the movie will increase the transfer of associations from the original equity to its new movie extension. Since my study is researching the perceptions of those who are already familiar with the original game source and like it, I expect that their associations transferred from the parent to the extension will be strong and positive. I adopt Sood and Dreze's proposition that in experiential brands the overlap of intangible features such as plot is more suitable as a measure of perceived fit between the parent and its extension than the overlap in physical attributes. Therefore, following the example of Joshi and Mao (2012), I regard fit as an overlap in content between the game and the movie. Hence, my first hypothesis is:

H1: FIT between the content of movie extension and the parent game will influence the evaluation of the extension positively.

EFFECT OF GAME PUBLISHER PARTICIPATION IN THE MOVIE PRODUCTION ON MOVIE

Up to now my paper regards game franchises as brands which occupy a category of specific associations and attitudes in the minds of the consumer. However, many of the successful video games are launched by game developing or/and publishing companies that are functioning as a brand on their own while maintaining a portfolio of video game franchises. It is impossible not to associate the notorious game series Super Mario with their creators and publishers Nintendo, while every fan of the iconic soccer video game FIFA is well aware that it is Electronic Art (EA), more precisely, their sub-brand EA Sports (the EA Sports logo and moto ("It's in the game") is announced in the in the intro video of every game made by the company).

Therefore, when viewing a video games as brand, we should analyze them in the context of their relationship with the brand of their publisher and the other games in the publisher's portfolio.

Aaker and Joachimsthaler (2000) suggest that interrelated brands can be organized in a *brand relationship spectrum* according to the driving role which each brand has in the purchase decision. In the upper end of the spectrum (*house of brands*) are brands that originate from the same master brand but have no connection with it in the consumer mind (e.g. RCA Corporation and General Electric), each brand being the sole driver for the purchase decision. In the bottom end of the spectrum (*branded house*) are brands which are inseparable from their strong master brand that has the dominant driver role for purchase (e.g. Virgin and its brands Virgin Airlines, Virgin Express, Virgin Radio etc.). In between are brand relationships where the driving role lies within both the master brand and the sub-brand.

The current paper will use the *brand relationship spectrum* to analyze the relationship between game creator brand and its own franchise, proposing that the first acts as a brand endorser of the second. This type of relationship suggests that the endorsed brand is independent and maintains unique brand benefits, but its link to the endorser brand provides credibility and substance of its offering. (Aaker & Joachimsthaler, 2000). An example of such relationship between brands is Marriott's endorsement of Courtyard, which essentially means that Marriott ensures its customers that Courtyard will deliver its brand promise. Furthermore, Aaker and Joachimsthaler (2000) suggest that an endorser supports the endorsed brands when stretching across different products and markets. Going back to context of experiential brands such as video games franchises and their creators, similar type of relationship can be observed. Each game franchise is a stand-alone piece of work purchased for the unique experience it delivers and can be regarded as a well-established brand on its own. However, the current paper suggests that the fans of the franchise are aware of

the creator brand (developer or/and publisher) behind their favorite game. Therefore, when the game extends to a new product category, the participation of the creator in the movie provides credibility and reassurance of the quality of the new offer in the eyes of the original customer.

In the current paper I prove that the audience well-familiar with a game franchise will evaluate its movie adaption higher if they know that it comes from the shadow endorser of the game (the developer/publisher). The reason is that the creator acts as insurance that the movie would be a credible extension of the original video game IP. Therefore, their feelings and knowledge of the parent brand game become diagnostic for judging the new movie extension and the strong positive affect they feel for the game will transfer on the new product, improving its evaluation. Therefore, my second hypothesis is:

H2: Game-based movies are evaluated higher if the creator of the game is involved in the production of the movie.

Furthermore, our study explores whether the involvement of the game creator moderates the effect of parent-extension content fit on the movie evaluation by the franchise fans. A series of studies demonstrate how fit may decrease the strength with which it affects consumers' evaluation of extension when other, more relevant for their judgment factors are present and equally accessible. For example, brand breadth (Boush & Loken, 1991), brand specific associations (Broniarczyk & Alba, 1994), brand-elicited effect (Yeung & Wyer, 2005) or decision context (Meyvis, et al., 2012) can moderate the effect of parent–extension similarity on the evaluation of an extension. The reason is that the consumers who experience any of these factors may use them as a basis for formation of their impressions, rather than their perceptions of core-extension fit. Broniarczyk & Alba (1994) illustrate that when a brand extends to a very different category but possess a benefit association that is relevant for that category, the extension is evaluated well, despite the lack of parent-extension fit. Melvys, Goldsmith & Dhar (2012) show how similarity with the parent brand decrease its importance for the evaluation of an extension when consumers are placed in a wider context of decision-making. Adding a picture of the product category and facilitating comparisons between brands makes consumers more focused on the quality of the original brand rather than how much it fits with the extension. Yeung & Wyer (2015) demonstrate how the subjective feelings consumers experience when they encounter a brand (brand-elicit effect) can be used as a basis for their judgment about the new extension, regardless the level of perceived parent-extension similarity.

I propose that the active role of the game publisher in the production of the movie adaptation can be enough to convince the fans in the plausibility of the adaptation, decreasing their reliance on parent-extension fit in content as a basis for their judgment. Therefore, any experiential deviation of the movie from the game such as changes in the plot, will not have a strong impact on their evaluation of the movie. However, when the game creator is not actively involved in the movie production, the extent to which the movie corresponds to the game remains fans' only cue how good the adaptation is. Therefore, any changes in narrative elements would have a significant negative effect on their evaluation, making fans perceive the movie as a rip-off of their favorite franchise, rather than a credible spin-off. In more scientific terms, we predict that there will be an interaction between the involvement of the game creator in the movie and the perceived movie-game fit, so that when the first holds true, the perceived fit (or the extent of changes made in the original game plot) will have less effect on the evaluation of the movie:

H3 A: The role of the creator will moderate the effect of fit on the evaluation of the movie.

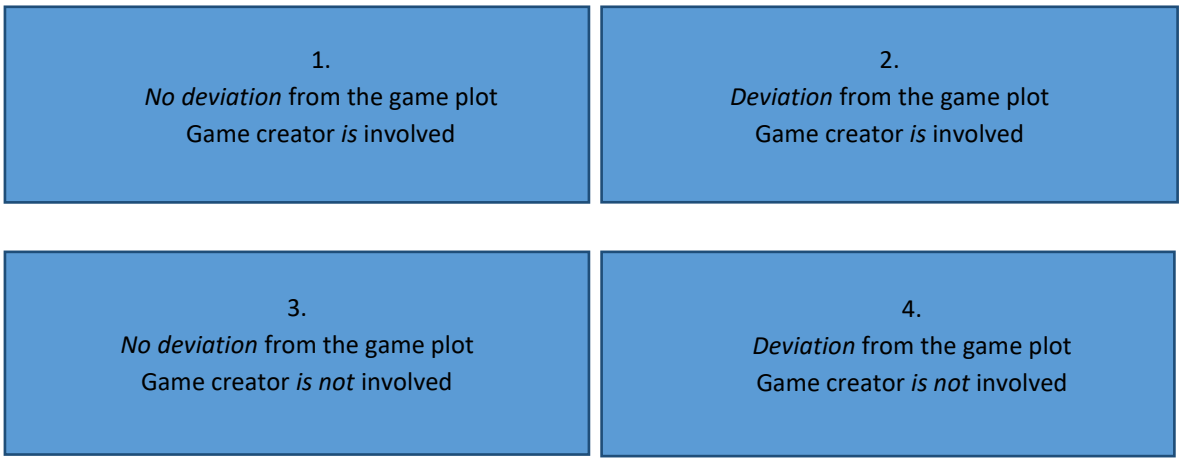
H3 B: When the creator participates in the production of the movie, the effect of fit on the evaluation of the movie will change.

METHODOLOGY AND RESEARCH DESIGN

In order to investigate how the fans of a video game evaluate its movie extension in the presence of the factors game-movie fit and game creator participation in the movie, my current study adopts an experimental approach.

The experiment conducted was a 2 (fit: high, without plot deviation or low, with plot deviation) by 2 (game creator: participating or not participating) factorial design with two between-subject game replicates. Two surveys were created – each based on a different game and each with four randomized conditions (see Figure 1). 396 participants completed a questionnaire for one of the two games and were randomly assigned to one of the four conditions in Figure 1.

Figure 1. Experiment conditions



PROCEDURE AND MANIPULATIONS

Video game selection

I selected two video games that have not been yet adapted into movies – *Mass Effect* and *Dark Souls (*part of the *Souls* series[2]*)* – and asked the fans of each franchise to fill in a survey about a movie adaptation based on one of the two (i.e., Dark Souls fans were filling in a survey for Dark Souls adaptation). More precisely, the adaptations were based on their first installments (*Mass Effect I* and *Dark Souls I* respectively.)

The franchises and their particular installments were selected because of several criteria. First, both are action role-playing games with adventure-related themes. Real-life examples from the motion picture industry show that the role-playing genre is the one most commonly adapted one, making our experiment conditions closer to reality. Second, both games and their first instalments have been well received by consumers and critics, thus having equally high equity. *Mass Effect I* (2008) has 89/100 critics' score and 8.6/10 user score on Metacritic, while the game *Dark Souls I* (2011) has earned 89/100 critics' and 8.7/10 user score by the same media. Finally, both franchises are still highly relevant in the contemporary gaming world. The third sequel of the Dark Souls series was released in 2016, while the latest instalment of the Mass Effect games – *Mass Effect:*

[2] The *Dark Souls* games are considered as the "spiritual successor" of the game *Demon's Souls,* created and developed again by FromSoftware. Despite being two entities of their own, *Demon's Soul* and *Dark Souls* are addressed together as the *Souls* series. In the current study, I will be focusing specifically on the *Dark Souls* games and not the entire *Souls* series due to the *Dark Souls* series being more contemporary. Therefore, I will consider Dark Souls I for the 1st instalment of the Dark Souls games.

Andromeda – debuted at the beginning of 2017, although initially planned for 2016. Additional proof of the equal "hotness" of the games was their participation in the ranking "Most Anticipated Video Games of 2016" by Metascore.

Boosting participants' memory of the original game content

In order to boost participants' memory of the respective game storyline and ensure they are capable to detect deviations from it, I included a short summary of the game plot, enhanced with a picture, in the beginning of each survey.

Ensuring participants are familiar with the original game content

Once the participants were exposed to the summary, they had to answer a check question what the main story of the respective game was. The right answer contained an exact sentence from the summary, ensuring that everyone who reads it or are familiar with the game plot, would select it. The other two options were made up storylines that have never been part of the original content. The purpose of the question was to serve as a check if the participant is familiar with the content of the game. Everyone who didn't give a correct answer would be excluded from the sample used for my analysis, as they do not hold enough memory of the game and/or are not fans, which would have biased their self-reported perceptions on game-movie fit later in the survey. After the summary and the check question, the survey proceeds with an announcement that a movie based on the game will be released and participants will read its description and give their evaluation.

Fit perception manipulation

In their study on movie sequels Sood and Dreze (2006) manipulate parent-sequel experiential fit/similarity by asking participants to read a short description of the sequel plot, adding a line of different (romantic) genre in the dissimilar condition. In the context of movies adapted from books, Joshi and Mao (2010) regard the fit in terms of content and manipulate it by telling the participants that the movie either closely follows the storyline of the original book (in the high-fit condition) or adds to it a new romantic element (the low-fit condition). Similar to the experimental approach of Sood and Dreze (2006) and Joshi and Mao (2010), participants in my surveys were asked to read a short announcement for the release of a new movie based on one of the two games. The second paragraph of the movie announcement contained a short description of the plot of the upcoming game adaptation. In the similar condition, the paragraph followed closely the game content, not

introducing any deviations. In the low-fit condition, a sentence was added in the end of the paragraph, stating that in addition to the main action, the movie will focus to a new, conceptually different element.

Several pre-tests were conducted for each video game to check if Joshi and Mao's manipulation of experiential fit was suitable in the current case of game-movie extensions and if adding a "romance" to the focus of the movie would cause the right amount of deviation in the condition with low parent-extension fit.

Dark Souls pre-tests

In the context of the Dark Souls experiment, there was a possibility that adding a conceptually different element to the story such as romance may result in the extension being perceived as extremely atypical to the parent. The categorization theory suggests that lack of fit between parent and an extension would halt the transfer of positive attitude from one to the other, resulting in a neutral or even slightly positive attitude to the extension (Boush and Loken (1991)). However, Boush and Loken (1991) propose that extreme mismatch can have a more dramatic impact. In certain product categories, a case of extremely atypical extension may elicit a strong negative response in consumers' minds. Due to the minimalistic and morbid world of Dark Souls, I feared that adding a love story as a deviation in the low-fit condition may result in the extension being perceived extremely different, eliciting a strong negative effect in game fans and overwriting the effect of participation of game creator and a possible interaction between the two.

Therefore, two pre-tests for the Dark Souls parent-extension fit manipulation were conducted. The first tested if manipulating fit with a new approach that did not involve adding a love story would be sufficient. The second pre-test checked the manipulation of perceived fit using the method from previous literature (Sood and Dreze (2006); Joshi and Mao (2010)) which involved adding a love story. Detailed description of the pre-tests, their results and conclusions are summarized in Table 1.

The outcome showed that the method used in previous literature is more efficient for manipulating fit perceptions than the one proposed by me and adding a love story focus as a deviation from the parent plot will not result in the new movie extension being perceived as dramatically different.

Therefore, for the main Dark Souls survey I decided to follow closely the manipulations of Sood and Dreze (2006); Joshi and Mao (2010).

Mass Effect pre-tests

Because the gameplay of Mass Effect allows the player to engage in a romance with different characters, there was a possibility that a adding a love story to the movie plot in the dissimilar condition would not make the film adaptation perceived different from the game. A pre-test was executed to check if the fit manipulations used by Sood and Dreze (2006); Joshi and Mao (2010) will work in the case of the Mass Effect plot. The description of the survey, its results and conclusions are summarized in Table 1.

The pre-test for Mass Effect clearly showed that a love story focus is not conceptually different to the game and adding it to the movie plot actually makes the extension being perceived closer to the original (the average fit perception in the case of love story inclusion was 0.4 points higher than in the condition where it wasn't included). The pre-test indicated a clear need to think of a new concept that will achieve the goal of signaling a deviation from the original plot. After consulting with some fans of the Mass-Effect franchise, I decided that in the main survey, the low-fit condition will announce an additional focus on the "pre-history" (the past) of the main character, since this was not revealed in details in the games and would be perceived as deviation from the original plot.

Table 1. Fit Pre-Tests Summary

Video Game	Fit condition manipulation	Results	Conclusion
Dark Souls Pre-test 1 (n=15)	No refreshment of participants' memory of the original game content was included. In the low-fit condition, it was announced that the movie will feature characters and an original	No significantly pronounced difference between the high-fit and low-fit condition: Sig.= 0.88, mean 5.5 in high-fit and 5.2 in low-fit condition.	The pre-test showed that the manipulation was not efficient and the average perception of fit was too similar in both conditions (only 0.3 points of difference in the means).

	plot, new to the existing storyline of the game.	The reliability of the fit perception scale was good (Cr. Alpha = 0.881)	
Dark Souls Pre-Test 2 (n=20)	Included refreshment of participants' memory of the original game content. Added a conceptually different (romantic) element to the focus of the movie plot in the dissimilar condition (Joshi & Mao; Sood & Dreze).	No significant difference between perceived fit in the two conditions: Sig.=0.66, Mean = 5.9 in similar condition; = 5.3 in dissimilar The scale appeared with questionable reliability (Cr. Alpha = 0.632).	Although the sample size was small and significance wasn't reached again, the pre-test showed that the difference between the average perceptions of fit in the two conditions was more pronounced (0.6 points of difference in the means).
Mass Effect Pre-Test (n=93)	Included refreshment of participants' memory of the original game content. Added a conceptually different (romantic) element to the focus of the movie plot in the low-fit condition (Joshi & Mao; Sood & Dreze).	There was not a significant difference between the perceived fit in the two conditions (Sig.=0.26) The average fit perception was higher in the low-fit condition (6.9) than in the high-fit condition (6.45) Satisfying reliability of scale (Cr. Alpha=0.83);	The pre-test for Mass Effect clearly showed that a love story focus is not conceptually different from the game, making the low-fit condition being perceived as = closer to the original plot.

Fit manipulation check in final surveys

A manipulation check for the perceived fit was included in both main surveys. Following the example of Joshi and Mao (2010), the respondents were asked to rate how similar they think the movie will be to the game on a two-item 7-point scale (movie will be very different/ the same; there will be a great deviation/ no deviation from the original game). In order to avoid biasing participants' evaluation of the movie by priming their thoughts on fit, I included the fit assessment questions after they have given their opinion on the movie. The manipulation check in the Dark Souls survey showed that there is a considerable difference between the fit perception means in the two conditions: 7.15 for the similar condition (no deviation) and 5.3 for the dissimilar condition (with deviation). The mean difference was significant at the 0.05 level (Sig.=0.03). In the case of Mass Effect, the difference between the means of the two conditions was less pronounced: 7.82 for the similar (no deviation) and 7.07 for the dissimilar (with deviation). Still, the difference was significant at the 0.05 level (Sig=0.042).

Game creator (endorser) involvement manipulation

As already mentioned, participants were asked to read a short announcement for the release of a new movie based on one of the two games, following the example of Sood and Dreze (2006) and Joshi and Mao (2010). In the condition of game creator participation, the first paragraph informed the participants that the original game creators are bringing their own famous franchise to the big screen, emphasizing that they "will keep full creative control" over the adaptation. The last third paragraph of the announcement contain short information about the company such as which other game franchises they are known for.

In the condition of *no involvement* of the game creator, participants are informed that "a major film studio" has bought the rights for the game franchise adaptation and is bringing it to the big screen. The whole announcement does not include any mention of the game creator brand, ending with a generic sentence that this is the first movie adaptation of the game franchise.

DATA COLLECTION

The two surveys were distributed in game fan groups in Facebook, as well as through posts on Tumblr, Instagram, Reddit and 9GAG. In Facebook, the individual surveys for each game were posted separately in the respective fan group – i.e. Mass Effect fans were given the Mass Effect

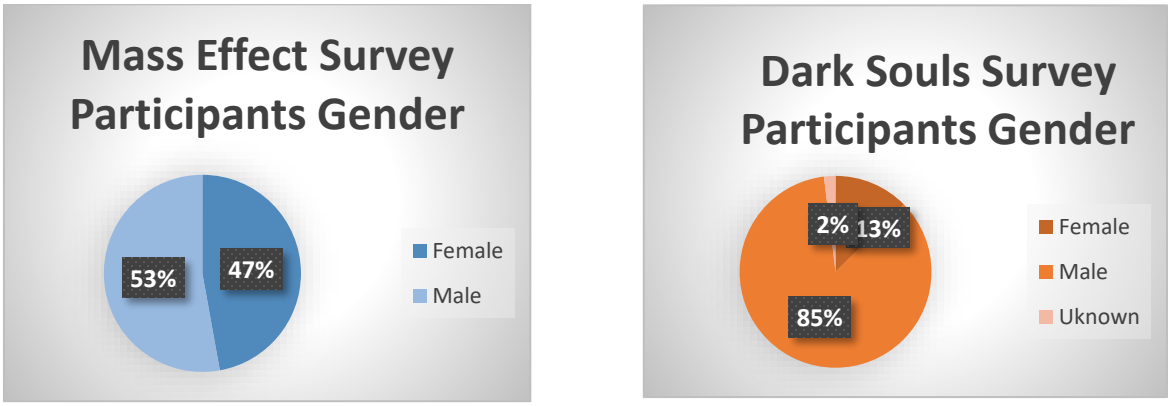
survey, Dark Soul fan groups received the Dark Soul survey. The posts on Tumblr, Instagram, Reddit and 9GAG included links to both surveys and explanation that the fans should fill in the survey corresponding to their favorite game. See the actual post for 9GAG and Reddit in Appendix 3. Between 20 and 23 January 2018, 396 people filled in one of the surveys at the condition that they have a chance to win a 20-euro Amazon voucher.

Sample description

118 respondents participated in the Dark Souls survey, only 103 from which filled in all fields and therefore were used as observations in the analysis. In the same period, the Mass Effect survey collected 278 respondents, of which 229 completed the survey in full and were therefore used further in the analysis.

The sample collected through the Mass Effect survey, contained more or less an equal spread between genders: 47% of the participants were female and 53% were male. In the sample collected via the Dark Souls survey, the male participants constituted 85%.

Figure 2. Surveys Participants Gender Distribution

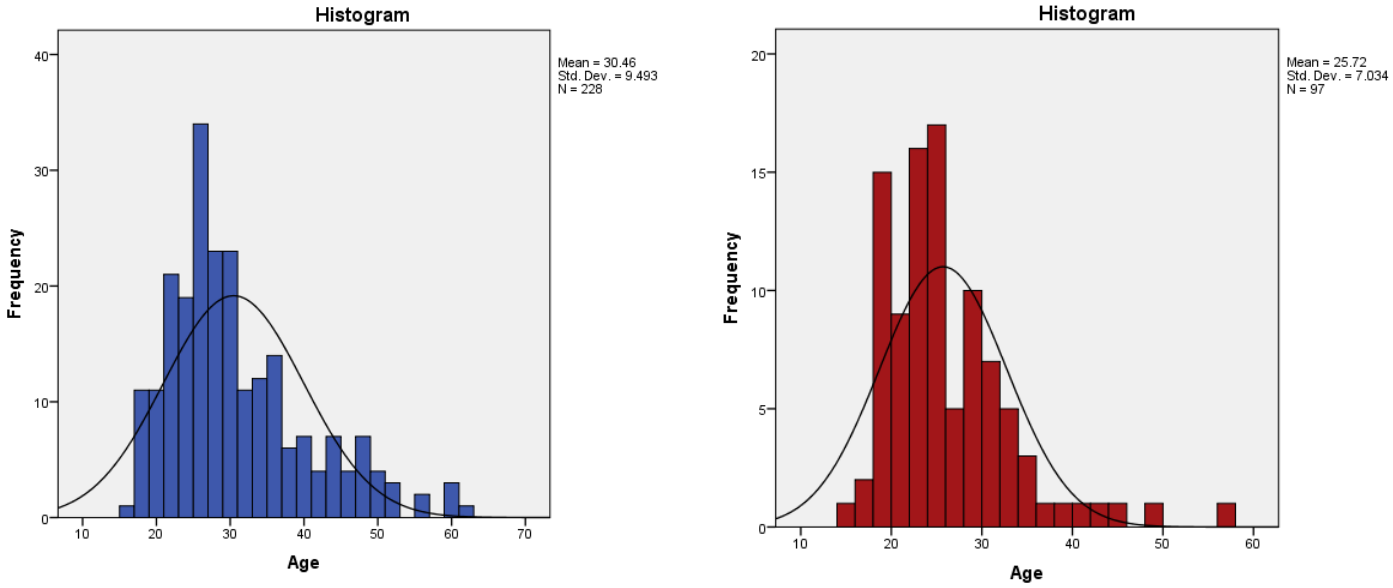


Participants from 28 different countries took part in the Dark Souls survey, USA accounting for the highest number of respondents: 42% (43 out of 103 people). The Mass Effect survey included participants from 48 different countries, again USA participants accounting for the highest share: 48% (109 out of 229 people).

When it comes to education, in both surveys the majority of participants had a Bachelor degree, 50% in the Dark Souls sample and 47% in the Mass Effect sample, followed by High School degree, 40% in the Dark Souls sample and 33% in the Mass Effect sample.

In both surveys, the most common age value of respondents lied in their 20s. 50.4% of the Mas Effect fans and 58.7% of the Dark Souls fans who participated in the surveys were between 20 and 29 years old, including. The age mode in the two surveys was also similar – 26 years in Mass Effect and 25 years in Dark Souls.

Figure 3. Mass Effect (Blue) and Dark Souls (Red) Survey Participants Age Distribution



The datasets were combined, creating a dummy control variable to account for the specifics of the game (Game Brand: Dark Souls = 1; Mass Effect = 0). Of the total 332 observations collected from both surveys, 18 didn't give a correct answer to the check question "What is the main plot" of the game for which they were filling a survey. These people were excluded from the sample as they do not hold enough memory of the original game content and cannot properly identify the main story in the game plot. Therefore, their perceptions of the fit manipulations in the different conditions would be biased.

VARIABLES AND DESCRIPTIVE STATISTICS

Dependent variable: Evaluation of movie adaptation

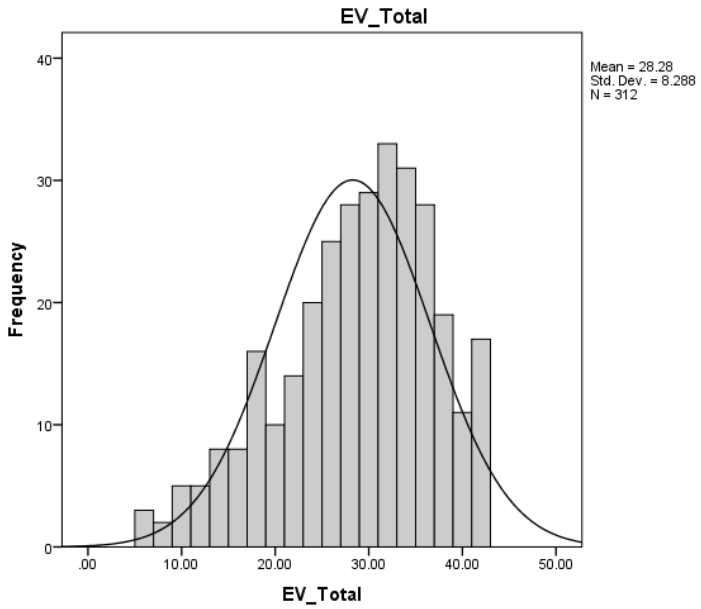
The dependent variable in my study is the evaluation of the movie adaptation by the fans of the game franchise. For its measurement we have adapted the approach of Sood and Dreze (2006) who use six 7-point scales: *bad movie/good movie*, *forget it/ must see*, *uninteresting/interesting*, *wait*

for rental/see opening night, will be a flop/will be a hit, and *sounds worse than most films/sounds better than most films*. In order to make the scales more relevant to the contemporary world, we have replaced the notion of "rental" with "download/stream". Therefore, the lowest evaluation that can be given to the movie is 6 (if the respondent slects the lowest 1 point on each of the six scales) , while the highest is 42 (if the respondent slects the highess 7 points on each of the 6 scales). See the destribution of evaluation values in Figure 4. To ensure that the six scales are altogether reliable and valid measurement of the respondents' evaluation of the movie, I performed a realiability analysis. Data showed that the measurementbconsctruct had a high reliability: Chronbach's Alpha = 0.896. Participants were asked to give their evaluation immediately after they were exposed to the movie announcement and the manipulations of fit and game creator participation. The distribution of the dependable variable in the dataset appeared negatively skewed to a moderate extent (-0.513).

Table 2. Dependent Variable Descriptive

	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
EV_Total	312	6.00	42.00	28.28	8.29	-.513	.138	-.261	.275

Figure 4. Distribution of Dependent Variable (Movie Evaluation)



Independent variables

Fit (Deviation from the plot or not)

The parent-extension fit was added as a binominal variable to the regression. The condition with high fit and no deviation from the original game plot, was the reference group, coded as 0, while the low-fit condition (containing deviation from the original plot) was coded as 1.

Game creator participation (Involved or not)

The game creator participation in the movie production was entered as a binominal variable in the regression too, where the condition of No participation was the reference group and was coded as 0. When the game developer was involved in the production, the variable would take a value of 1.

Table 3. Independent Variables Descriptives

Variable	Condition		Frequency	Percent	Valid Percent	Cumulative Percent
Fit	High	.00	154	49.4	49.4	49.4
	Low	1.00	158	50.6	50.6	100.0
		Total	312	100.0	100.0	
Creator	Not involved	.00	157	50.3	50.3	50.3
	Involved	1.00	155	49.7	49.7	100.0

	Total	312	100.0	100.0	

Control variables

Affect for the game brand

The aim of my experiment is to establish the relative diagnosticity of two cues (fit and endorser participation) for the evaluation of game-based movie particularly among the people who like the original game franchise. Since my hypothesis are based the categorization theory suggesting that these cues ensure affect and attitudes transfer from the parent brand (game) to the extension (movie), affect and positive attitudes have to be present in the consumer mind in first place. Therefore, it is crucial that the participants in my survey are people who have played the games and like them. In order to verify and control for the presence of affect towards the game, I constructed a measure reflecting to what extend the participants liked the game, following the example of (Bhata & Reddy, 2001) and (Holbrook & Batra, 1987). I asked the participants to indicate on a 7-point scale how much they like the game brand (*I dislike the game/ I love the game*) and to what extend they have a positive or negative opinion of the game brand (*The game is bad/ The game is great*). I expect that the higher is the affect hold for the game by a participant, the higher will one's evaluation of the movie be in any of the conditions.

Familiarity with the game brand

Broniarczyk & Alba (1994) show how a brand can stretch to a category very different from its original one as long as it possesses specific associations, desirable in the new category. The study also illustrates how the influence of the desirable parent-brand associations on the evaluation of an extension depends on the consumer knowledge of the brand itself. Since brand associations are type of knowledge consumers held of the brand, the study showed that more knowledgeable customers are more likely to use the associations as a base for their extension evaluation.

Following that train of thought, respondents who possess high knowledge of the game will be more capable of judging how similar is the movie plot to the original and associating the game brand with a brand endorser (game creator). Therefore, they will be more likely to be influenced by the fit and game developer participation manipulations in my survey. To account

for this I introduced a variable controlling for the different amount of game knowledge and associations in respondents' minds. Its measurement was on a 7-likert scale (never heard of / very aware of) adapted from Broniarczyk & Alba (1994).

Familiarity with the game creator brand

In the current paper I investigate the evaluation of a game-movie extension as a function of the perception that it is coming from the original game endorser - the publisher/developer of the game. Therefore, holding associations and knowledge of the brand endorser (game creator) itself would also affect the extent to which respondents are influenced by its role in the movie production. Therefore, I included a control variable accounting the familiarity of the participants with the game creator brand, measured by a 7-likert scale (never heard of / very aware of). The measurement was adapted from Broniarczyk & Alba (1994).

Affect for the game creator brand

Among the participants, familiar with the game creator brand, there may be some who hold positive or negative attitude towards it. People, who like the game creator and have a positive opinion about their brand, would evaluate the movie adaptation better, when they perceived it is produced by the same creative minds. The opposite holds true in case of negative attitude towards the original creator – the movie evaluation in the condition of involvement would be worse. Therefore, the survey in the conditions where the game creators were involved, participants had to indicate on a 7-point scale how much they like the creator's brand (*I dislike Bioware/ I love Bioware*) and to what extent they have as positive or negative opinion of it (*Bioware make bad games/ Bioware make great games*).

Game-specific characteristics

Finally, a dummy control variable is included to account for any differences between the games' adaptability into movie according to the participants' perception. For example, one of the games may be perceived as more suitable for adaptation or more likeable as a movie due to specific characteristics it owns, beyond the focus of my study. Therefore, a dummy variable (either game 1 or not) is included in the model, accounting for any specific differences between the two franchises that may cause difference in the evaluation of their movie extensions.

Table 4. Control Variables Descriptives

	N	Min.	Max.	Mean	Std. Deviation
Game_Fam	312	1	7	6.90	.589
Creator_Fam	312	1	7	6.58	.988
Game_Affect	312	2.00	14.00	13.5513	1.76531
Creator_Affect	312	2.00	14.00	12.1731	2.16569

LINEAR REGRESSION

$$Y = \beta_0 + \beta_1 Fit + \beta_2 Creator + \beta_3 Fit \times Creator + \beta_4 Game\_Affect + \beta_5 Game\_Fam + \beta_6 Creator\_Effect + \beta_7 Crator\_Fam + \beta_8 Game$$

The method I chose for my study was a linear regression with six independent variables on nominal and interval scales and a single interval-scaled dependable variable (see Table 5). The observations used in the study were 312, excluding the people who did not answer the question "What's the main plot?" correctly.

Table 5. Regression variables summary

	Name	Scale	Description/Coding
Dependent variable	Evaluation of the movie (EV_Total)	Interval	The extent to which participants liked the developer brand measured on a two-item 7-point Likert scale.

Independent variables	Fit	Nominal	0= There is no deviation from the original plot (High fit); 1= Deviation from original plot is introduced (Low fit);
	Game creator involvement (Creator)	Nominal	0= There is no mention of the creator; 1=The creator participates in the movie;
	FitxCreator	Nominal	Interaction between game-movie fit and the involvement of the game creator
Control variablec	Affect for the developer brand (Creator_Affect)	Interval	The extent to which participants like the developer brand measured on a two-item 7-point Likert scale.
	Affect for the game brand (Game_Affect)	Interval	The extent to which participants like the game measured on a two-item 7-point Likert scale.
	Familiarity with the game brand (Game_Fam)	Interval	The extent to which the participants perceive themselves knowledgeable of the game on a 7-point Likert scale.
	Familiarity with the developer brand (Creator_Fam)	Interval	The extent to which the participants perceive themselves knowledgeable of the game developer on 7-point Likert scale.
	Game	Nominal	0= Mass Effect, 1=Dark Souls,

Checking assumptions

Multicollinearity

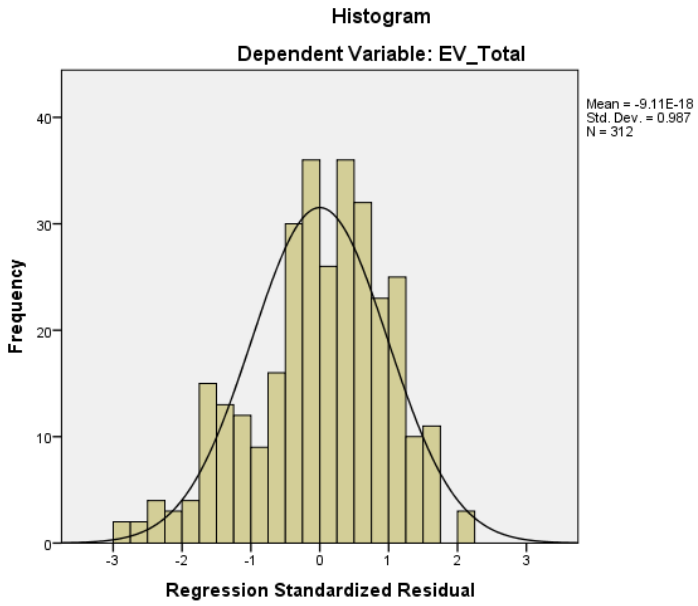
Analysis showed that the interaction variable *FitxCreator* is significantly correlated with each of the two independent dummy variables *Fit* and *Creator* (Pearson Corr. Coefficients equaled 0.575 and 0.586 respectively). *Fit* and *Creator* are not significantly correlated with each other or with any of the other factors included in the model, beside the interaction term.

Analysis showed that there was also high correlation between two pairs of control variables: *Familiarity with Creator* and *Familiarity with Game* (Pearson Corr. =0.624, significant at 0.01 level) and *Game Affect* and *Creator Affect* (Pearson Corr. = 0.617, significant at 0.01 level). As the regression coefficients of these control variables do not need to be interpreted for the purpose of the study, the multicollinearity is not addressed and the variables are kept in the regression. Analysis of the Correlations is provided in Table 6 in the Appendix.

Presence of outliers and non-normal distribution of residuals

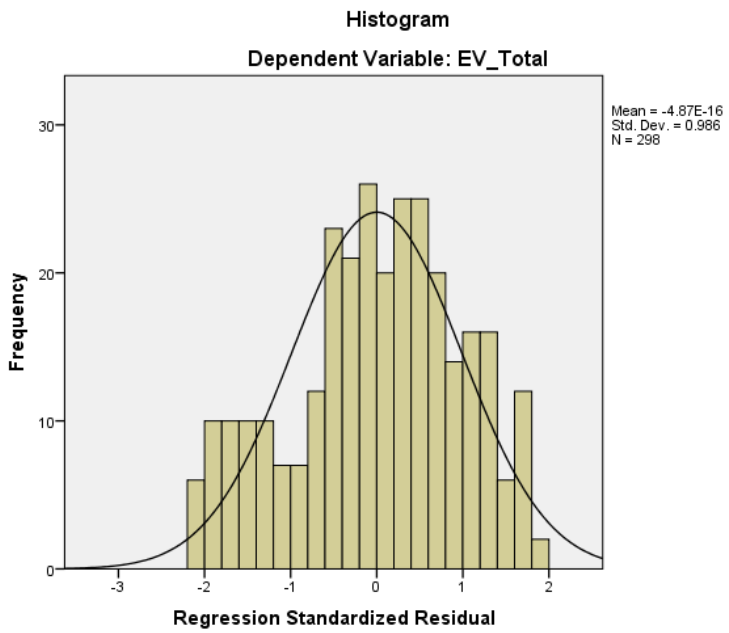
After performing a test in SPSS to determine whether the standard residuals of the regression are normally distributed, it became clear this assumption of the regression is violated and the residuals' distribution is not normal (0.00<0.05, see test results in Table 7 in Appendix).

Figure 5. Distribution of standardized residuals with outliers (N=312)



Furthermore, the Causeway diagnostics in SPSS showed that there are 14 observations flagged as outliers lying outside 2 standard deviations. Once the 14 outliers are removed from the sample of observations and a regression with the remaining 298 cases is run, the distribution of residuals normalized according to Kolmogorov-Smirnov test (0.056>0.05) (see Table 8 in Appendix)

Figure 6. Distribution of standardized residuals with outliers (N=298)



Analysis of regression results and hypothesis testing

After removing the 14 outliers, a linear regression analysis is run in SPSS with the new sample of 298 observations. Two linear regression models were compared – one restricted, without the interaction *FitxCreator* and one with the interaction.

Model fit

An indication of the two model's meaningfulness can be found in the analysis of the adjusted r-square provided by SPSS (see Table 9 in Appendix). For both models the null hypothesis that the adjusted R-square is equal to 0 (the sum of all coefficients = 0) was rejected, confirming that the models are meaningful. Unfortunately, the proposed regression models explains only 16% of the variation in the dependent variable - evaluation of movies based on video games (Adjusted R Square = 0.16) (see Table 10 in Appendix). Most likely, there are a lot of other factors influencing how the fans evaluate a movie adaptation which are beyond the scope of this study and are therefore, omitted from the regression. The addition of the interaction variable to the 'restricted' model does not lead to a significant improvement in the model (Sig. F Change= 0.442 > 0.05) (see Table 10 in Appendix).A P-P Plot of the Regression's Standardized Residuals can be found in Figure 7 in the Appendix.

Results and hypothesis testing

In both regression models, the most important factor for the evaluation of a movie is the extent to which the respondent likes the game. The *Game Affect* control variable has the highest stand. regression coefficient (0.3) in both models. The control regressors *Game Familiarity*, *Creator Familiarity*, as well as *Creator Affect* do not reach significance in either of the models. The second most influential factor in the regression is the control variable *Game*: -0.2 stand. Coefficient in both models. Apparently, the movie adaptation of Dark Souls (the game that was the reference group for the variable) received worse evaluation by its fans across all conditions, compared to the Mass Effect game adaptation.

Restricted vs. expanded model

As already mentioned, analysis showed that the addition of the interaction to the regression, does not lead to improvement in the model (Sig. F Change= 0.442 > 0.05) (see Table 10 in Appendix). Unsurprisingly, the interaction term doesn't reach significance in the expanded model (see Table 12). On the basis of this, I can conclude that my hypothesis H3 is rejected, since the moderator coefficient is not significantly different from zero:

Rejected: H3:A: The role of the game creator will moderate the effect of fit on the evaluation of the movie.

In presence of the interaction term *FitxCreator*, the significance and the impact of the other two dependent variables – *Fit* and *Creator*. The *Fit* coefficient becomes insignificant, once the interaction is added to the model, while the *Creator* variable remains significant at 0.05 level but the magnitude of its effect increases (2.628 unstand. coefficient in restricted model vs. 3.253 in the expanded). Therefore, my prediction that the impact of Fit will decrease its strength when interacting with the creator variable was also not fulfilled, since neither the interaction, nor the Fit variable reach significance in the model:

Rejected: H3 B: When the game creator participates in the production of the movie, the effect of fit on the evaluation of the movie will change.

In the restricted regression model without the interaction term, both independent variables - *Fit* and *Game Creator* involvement - are significant at 0.05 level (see Table 11). In the low-fit condition, when a deviation from the original game plot is introduced (Fit) =1) and all other variables remain

constant, the evaluation score of the movie adaptation decreases (unstandard. coefficient in restricted model is equal to -1.934, see Table 11). Therefore, the evaluation of the movie in the high-fit condition is higher than in the low-fit. On the basis of this result, I can accept my first hypothesis:

Accepted: H1: Fit between the content of movie extension and the parent game will influence the evaluation of the extension positively.

The effect of the game creator participation is even stronger than the one of the Fit. When the creator of the game participates (*Game Creator* = 1) and all other variables remain constant, fans evaluate the movie significantly better (unstand. coefficient = -2.628, see Table 11). Therefore, I can also conclude that my second hypothesis can be accepted:

Accepted: H2: Game-based movies are evaluated higher if the publisher of the game is involved in the production of the movie.

Table 11. Regression coefficients in Restricted

Restricted model					
Independent variables		Unstandard. Coefficients	Standard. Coefficients	t	Sig.
Constant		14.330		3.083	.002
FIT	Game-movie Fit	-1.934	-.130	-2.427	.016
Creator	Game creator involvement	2.628	.177	3.294	.001
Creator_Fam	Familiarity with the game creator brand	.090	.012	.167	.868
Game_Fam	Familiarity with the game brand	-.698	-.056	-.726	.468

Game_Affect	Affect for the game brand	1.246	.301	3.902	.000
Creator_Affect	Affect for the game creator brand	.201	.059	.801	.424
Game	Game	-3.375	-.199	-3.577	.000

Table 12. Regression coefficients in Expanded model

Extended model					
Independent variables		Unstandard. Coefficients	Standard. Coefficients	t	Sig.
Constant		14.043		3.009	.003
FIT	Game-movie Fit	-1.315	-.088	-1.160	.247
Creator	Game creator involvement	3.253	.219	2.856	.005
Creator_Fam	Familiarity with the game creator brand	.095	.013	.176	.860
Game_Fam	Familiarity with the game brand	-.695	-.056	-.722	.471
Game_Affect	Affect for the game brand	1.228	.297	3.833	.000
Creator_Affect	Affect for the game creator brand	.215	.063	.853	.394

Creator	Game creator involvement	-3.410	-.201	-3.608	.000
Creator_Fam	Familiarity with the game creator brand	-1.225	-.072	-.769	.442

GENERAL DISCUSSION

My study, analyzing 298 video game fans' observations collected through a survey, fulfilled its aim to provide insights on how they evaluate a movie adaptation based on their favorite game.

First, both game-movie fit and involvement of the original game creator in the movie production had significant main effects in the regression model, proving that they play a role in the formation of opinion among the audience familiar with the original content. When a game extends to a new category such as movie, the fans of the original source expect to see a high degree of overlap between the game content and new product. Therefore, changes in the original game plot would result in worse evaluations of the adaptation among the core audience. Furthermore, the participation of the original creator is even a stronger factor than game-movie fit for shaping the perceptions of the game fans. Knowing that the adaptation is endorsed by the same entity which created the original game source provides credibility of the movie in the eyes of the game fans and influences positively their evaluations. However, my third hypothesis stating that the participation of game creator will change the effect of game-movie fit on the fans' evaluation was rejected as the moderator variable reflecting this relationship did not reach significance in the regression model. Therefore, my expectations that fans may not be influenced that much by changes in the content of the game, as long as the game creator participates in the movie, were not confirmed.

Finally, my study revealed two additional insights that are worth taking into account when examine the performance of game adaptations. First, it seems that affect for the game or the extent to which a person likes it, has the strongest influence on the evaluation of the movie. In other words, those who indicated higher degree of affect, gave better evaluations of the new movie. Second, the game itself is a predictor of fans' evaluation of its adaptation meaning that different games are not perceived equally suitable for adapting. In the case of my study, Dark Souls fans evaluated its

adaptation significantly worse across all conditions, compared to the Mass Effect fans' evaluations of the Mass Effect adaptation. This means that different game equities may not receive the same support from their fans when extending to new category of movies.

MANAGERIAL RELEVANCE

The current study helps both movie and game makers to understand how the original game audience would evaluate an extension of game equity into a movie. From one hand, the health of the game brand and ultimately the cross-media franchise depends on whether the new extension successfully fulfills the expectations of the original audience (Aarseth, 2006). On the other hand, considering the high costs associated with movie production (for example Rovio invested $73 million in the film "Angry Birds"), both movie and game creators want the new movie to perform well in box-office terms. Targeting the original fans properly can be especially important for the early stage of the box-office when due to limited information of the movie available, the awareness of the original game equity is the main factor influencing movie goers and driving box-office revenues (Joshi & Mao, 2010).

While in the past two decades it was common for game creators to pass over movie rights to the movie makers without ensuring creative control over the motion picture (J. Lang, 2016), more and more contemporary game publishing companies prefer to actively participate in the adaptation of their games into movies. This is not surprising, having in mind that contemporary video games are utilizing similar means of production to those of movies and are associated with comparably high production costs (T.C., 2014) (Aarseth, 2006). Therefore, by expanding the life of their franchise beyond the game category, game creators also benefit from economies of scales in terms of marketing expenditures by promoting simultaneously their game and the new movie. Recent cases where game makers actively participated in the production of a movie extension based on their equities are the game adaptations "Angry Birds" and "World of Warcraft". Both of the movies were produced in a close collaboration with the developers (and simultaneously publishers) of the games – Rovio and Blizzard respectively. In front of Rolling Stone magazine Blizzard's director of story and creative development James Waugh said that the director of the film "Warcraft" Duncan Jones made all creative decisions with the full support of the game company (Newman, 2016). Blizzard further tied the relationship between the movie and the

game by participating in the promotion of the film, giving away free copies of the game to those who went to see it (Hruska, 2016). At the same time, instead of licensing the characters of their franchise "Angry Birds" in exchange for percentage of the proceeds, Rovio financed the movie by themselves, ensuring full and long-term control over the franchise (Fritz, 2016). Another movie based on video game made its debut at the end of 2016 – "Assassin's Creed"- produced again in collaboration with the creators of the game Ubisoft, who even established an internal movie division Ubisoft Motion Pictures for the purpose of adapting their own video games into films and TV (Keslassy, 2011). The vice president of global marketing at Ubisoft Motion Pictures Stephanie Simard confirmed that the company has kept creative control over the movie and is dedicated to engage the fans of the franchise to full extent (Takanashi, 2016).

First, my study showed how the participation of the game creators in the movie adaptation of their game influences positively its evaluation among the core fans of the game, increasing the odds for success of the new product. Moreover, producing a game adaptation in isolation from the original creator may harm the original fan's perceptions towards the new product by making it look like a "rip-off" rather than a credible extension. Therefore, both movie producers and game creators can maximize the performance of a game franchise that extends to the new category of movies by actively communicating and emphasizing the endorsement of the movie by the original creator, in order to improve the evaluations of those familiar with the original source.

Second, my paper showed that both movie and game makers should strive to transfer the important elements of the game plausibly when extending it into a movie and should avoid stretching the original plot too far by adding storylines, absent from the original game plot. My research demonstrated that changes in the original content of the game can worsen the evaluation of the movie among those familiar with the original content. This is in line with results from previous research on book adaptations where the similarity between the book and the movie had a positive effect on the movie evaluation (Joshi & Mao, 2010).

Finally, my study also revealed that the affect towards the game exerts the most powerful influence on the evaluation of a movie adaptation by the audience familiar with the game. The more one likes the original game equity, the more positive their perceptions towards the new movie product are, regardless of the endorsement of the game creator and the extent to which it fits the game. However, not all games meet the same support from their original fan audience

when they extend into movies. My survey showed that the movie adaptation of Dark Souls received lower evaluations compared to the one of Mass Effect across all conditions, regardless of whether the game creator participated in the production or the extent of game-movie fit. Therefore, it seems that games are not equally adaptable into motion pictures because fans' evaluation of the movie extension is also subject to unique for that game associations. This has important implications for movie makers who can decrease the risk of creating a box-office flop by choosing a suitable game equity to leverage on the big screen, taking into account the specific associations and perceptions it creates among its original fan audience.

ACADEMIC CONTRIBUTION

My thesis contributes to the marketing literature and more precisely, to brand extension research in the context of experiential goods. While a series of notable studies (Sood and Drèze, 2006; Basuroy and Chatterjee, 2008; Hennig-Thurau et al., 2009; Joshi and Mao, 2010; Knapp et al., 2014; Bohnenkamp et al., 2014) have applied brand extension theory to examine experiential extensions such as novel adaptations, movie sequels and remakes, my paper is the first to do so in the case of movies adapted from games. My research showed that despite the dramatic difference in the narrative and the cognitive affordances of the two mediums, fit between game and its movie adaptations can also be regarded as an overlap in experiential attributes such as plot and it does affect the evaluation of this type of extension too.

Moreover, I have also shown how another aspect of brand extension theory can be applied in the case of game-movie extension – the brand relationship spectrum. Just like consumer goods, game franchises are brands and they exist in relationship with other brands such as the one of their creator - their publisher or/and developer. Therefore, when game equity extends to another medium category such as movie, the endorsement of the new product by the brand of the creator provides credibility to the new offer and influences positively its evaluation by the core consumer audience familiar with the original product and aware of the creator-game relationship.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

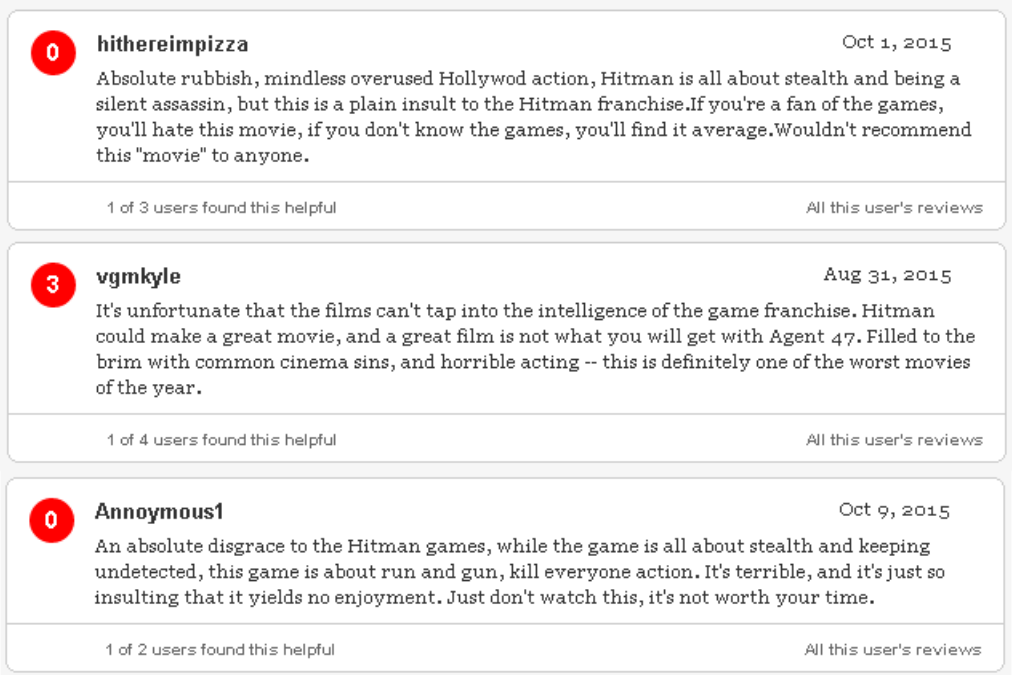
In my study, I adopt the assumption that the original audience of a game is important for the financial performance of a motion picture based on that game. The grounds for my assumption are insights suggested by movie makers, as well as previous academic research (Joshi & Mao, 2010), showing that the original equity of a source is what drives the revenue of a motion picture based on it, especially in the early stage of the box office (the opening weekend). Therefore, I assume that the people aware of the original game equity such as its fans are the most likely audience of the movie adaptation and therefore, their evaluation can affect its revenue significantly in the first period of the box-office performance. However, further research needs to be conducted in order to test and quantify the actual impact of game fans' evaluation of a game adaptation on its performance in box-office terms.

Furthermore, future research needs to test if my findings on how original game fans evaluate game adaptation for the big screen are also valid in the context of a larger audience, not limited to people who like and are aware of the game only.

Finally, my study examines perceptions toward made-up movies that have not yet been released. Therefore, the perceptions of my research audience are largely affected by the current practices in the motion picture business. Fans' evaluations in light with the two factors examined – game-movie fit and game creator participation - could have been different if they were presented with an actual release of a game adaptation, in which the movie makers and game creators have applied the methods suggested by my study. Future research can address this issue by analyzing self-reported data after an actual release of a game adaptation has happened.

APPENDIX

Appendix 1.Bad User Reviews of the movie "Hitman: Agent 47" on Metacritic



0 **hithereimpizza** Oct 1, 2015

Absolute rubbish, mindless overused Hollywod action, Hitman is all about stealth and being a silent assassin, but this is a plain insult to the Hitman franchise.If you're a fan of the games, you'll hate this movie, if you don't know the games, you'll find it average.Wouldn't recommend this "movie" to anyone.

1 of 3 users found this helpful All this user's reviews

3 **vgmkyle** Aug 31, 2015

It's unfortunate that the films can't tap into the intelligence of the game franchise. Hitman could make a great movie, and a great film is not what you will get with Agent 47. Filled to the brim with common cinema sins, and horrible acting -- this is definitely one of the worst movies of the year.

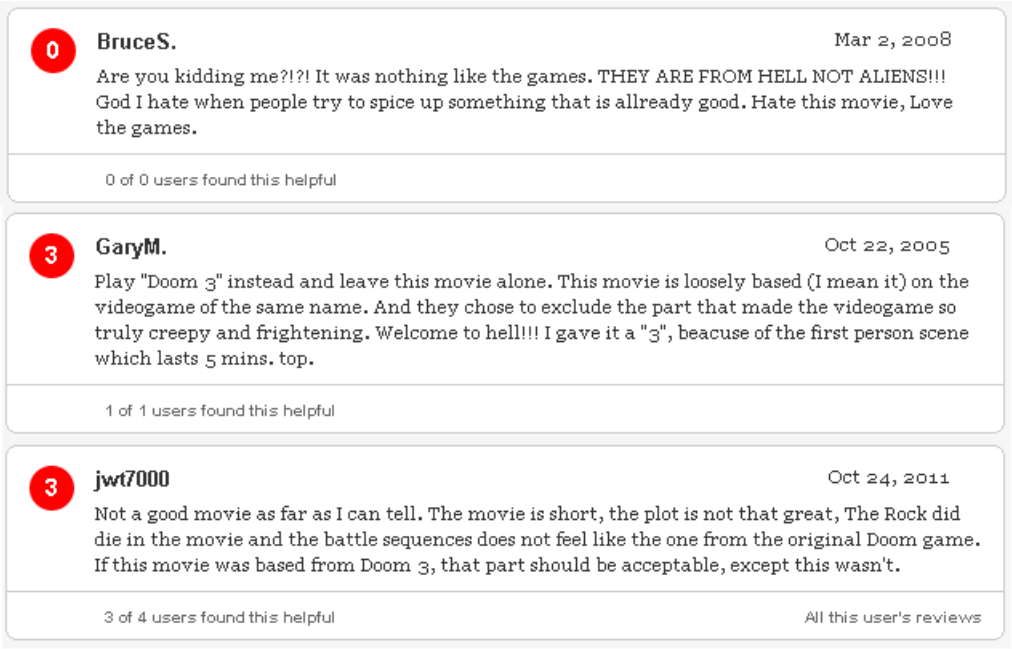
1 of 4 users found this helpful All this user's reviews

0 **Annoymous1** Oct 9, 2015

An absolute disgrace to the Hitman games, while the game is all about stealth and keeping undetected, this game is about run and gun, kill everyone action. It's terrible, and it's just so insulting that it yields no enjoyment. Just don't watch this, it's not worth your time.

1 of 2 users found this helpful All this user's reviews

Appendix 2.Bad User Reviews of the movie "Doom" on Metacritic



0 **BruceS.** Mar 2, 2008

Are you kidding me?!?! It was nothing like the games. THEY ARE FROM HELL NOT ALIENS!!! God I hate when people try to spice up something that is allready good. Hate this movie, Love the games.

0 of 0 users found this helpful

3 **GaryM.** Oct 22, 2005

Play "Doom 3" instead and leave this movie alone. This movie is loosely based (I mean it) on the videogame of the same name. And they chose to exclude the part that made the videogame so truly creepy and frightening. Welcome to hell!!! I gave it a "3", beacuse of the first person scene which lasts 5 mins. top.

1 of 1 users found this helpful

3 **jwt7000** Oct 24, 2011

Not a good movie as far as I can tell. The movie is short, the plot is not that great, The Rock did die in the movie and the battle sequences does not feel like the one from the original Doom game. If this movie was based from Doom 3, that part should be acceptable, except this wasn't.

3 of 4 users found this helpful All this user's reviews

Appendix 3. Survey Post in 9GAG and Reddit

Table 6. Significant correlations between independent variables in the regression

Correlations (N=312)				
Variable		FitxCreator	Dev_Fam	Dev_Affect
Fit	Pearson Correlation	.575**	-0.06	-0.087
	Sig. (2-tailed)	0	0.294	0.125
Creator	Pearson Correlation	.586**	0.101	0.024
	Sig. (2-tailed)	0	0.074	0.67
Game_Fam	Pearson Correlation	-0.002	.624**	.387**
	Sig. (2-tailed)	0.974	0	0
Game_Affect	Pearson Correlation	-0.061	.362**	.617**
	Sig. (2-tailed)	0.284	0	0
**. Correlation is significant at the 0.01 level (2-tailed).				

Table 7. Tests of Normality SPSS output before removing outliers

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.068	312	.001	.978	312	.000
a. Lilliefors Significance Correction						

Table 8. Tests of Normality SPSS output after removal of outliers

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.051	298	.056	.976	298	.000

a. Lilliefors Significance Correction

Table 9. Regression analysis output in SPSS

Model		Sum of Squares	df	Mean Square	F	Sig.
1 Restricted (without interaction)	Regression	2986.071	7	426.582	9.150	.000[b]
	Residual	13520.725	290	46.623		
	Total	16506.795	297			
2 Extended (with interaction)	Regression	3013.713	8	376.714	8.069	.000[c]
	Residual	13493.082	289	46.689		
	Total	16506.795	297			

Table 10. Regression analysis output in SPSS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1 Restricted (without interaction)	.425[a]	.181	.161	6.82812	.181	9.150	7	290	.000
2 Restricted (with interaction)	.427[b]	.183	.160	6.83293	.002	.592	1	289	.442

Figure 7. Normal P-P Plot of Regression Standardized Residual

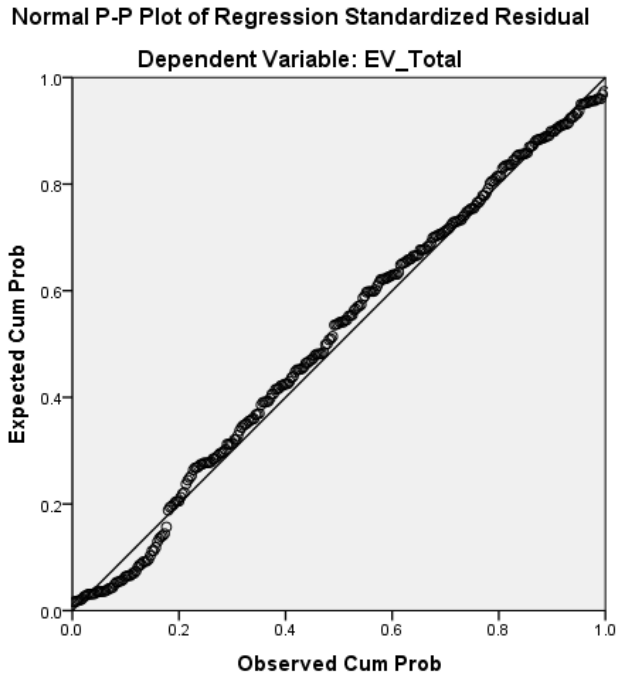


Table 13. Regression Coefficients output in SPSS

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.330	4.648		3.083	.002
	Fit	-1.934	.797	-.130	-2.427	.016
	Creator	2.628	.798	.177	3.294	.001
	Creator_Fam	.090	.538	.012	.167	.868
	Game_Fam	-.698	.962	-.056	-.726	.468
	Game_Affect	1.246	.319	.301	3.902	.000
	Creator_Affect	.201	.251	.059	.801	.424
	Game	-3.375	.944	-.199	-3.577	.000

2	(Constant)	14.043	4.666		3.009	.003
	Fit	-1.315	1.134	-.088	-1.160	.247
	Creator	3.253	1.139	.219	2.856	.005
	Creator_Fam	.095	.538	.013	.176	.860
	Game_Fam	-.695	.962	-.056	-.722	.471
	Game_Affect	1.228	.320	.297	3.833	.000
	Creator_Affect	.215	.252	.063	.853	.394
	Game	-3.410	.945	-.201	-3.608	.000
	FitxCreator	-1.225	1.591	-.072	-.769	.442
a. Dependent Variable: EV_Total						

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