



**BACHELOR THESIS** 

## Sounds fun? Game on!

Effects of review valence, anticipation, and parasocial interaction on continuation intention after playing a game compared to watching a Let's Play

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#### Abstract

**Aim:** With increasing numbers of video games being distributed, consumers' reliance on the experiences and recommendations of other members and reviews within gaming communities rose as well. However, the gaming community is not only limited to games but also offers members the possibility to watch Let's Plays, which are gameplay videos accompanied by a narrator aimed to entertain viewers. Games and Let's Plays both have the potential to evoke different feelings during the media consumption. Therefore, the current study aims to examine the different elements that influence consumers' decision to continuously engage with a game.

**Methods:** The aim of the study was investigated by comparing the impact of reviews and their perceived trustworthiness on intentions to play and anticipations before the media consumption to the perceived enjoyment, engagement, and parasocial interaction after the media consumption. To do so, an online 2 (medium: game vs. Let's Play) x3 (review: positive vs. negative vs. neutral) between-subjects experimental design was created resulting in 264 valid responses (Age: M = 25.95, SD = 7.35, Gender: Male = 59.8%, Female = 37.5%, Other = 2.7%).

**Results:** Results show that reading a review before engaging with a game or Let's Play significantly influenced intentions to play and anticipations of a game, which amplified enjoyment, engagement, and parasocial interaction perception after the media consumption. These perceptions further increased continuation intentions for which unique benefits per medium were identified. Playing a game led to higher enjoyment and engagement while watching a Let's Play led to higher parasocial interaction perceptions.

**Discussion:** Findings underline the importance of the impact of previous evaluation exposure in form of reviews on the decision-making process of consumers and how varying media leads to unique benefits. Game publishers should make use of reviews and Let's Plays to increase the distribution their games while game developers should design their game characters based on their target group in order to evoke feelings of identification and parasocial interaction. Main limitations include a lack of control due to the nature of online experiments and factors that were not controlled for (i.e. review trust).

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#### **1. Introduction**

In December 2020, the video game industry reached its record sales rate of 7.7 billion US Dollars in the United States and is expected to grow to a value of over 200 billion US Dollars worldwide by the year 2023 (Statista, 2020; Statista, n.d.). These increasing numbers relate to varying experiences while playing a game and the decision-making process of initially engaging with a game. Within this process, consumers first reach out to different information sources to guide their decision-making process. Once the decision to engage with a game has been made, consumers experience varying emotions during a media interaction which influence their intention to continuously seek out the same experience. However, especially within the gaming community, these experiences and intentions can be influenced by previous held beliefs and anticipations after gathering information (Boyle et al., 2012; Yang et al., 2012).

One source of information are reviews which can be defined as electronic word-of-mouth (eWOM) and assess a game based on consumption related evaluations (Babić-Rosario et al., 2019). Readers of these reviews are oftentimes exposed to varying review valence due to reviews containing positive as well as negative connotations, which is subsequently amplifying their decision to start engaging with a game based on the tone of the review. For instance, a reader of a negative review would be less likely to purchase a game while a positive review would increase their intention. Consequences of these effects were not only found for individual consumers but were also reflected in overall price changes withing the video game industry (Choi et al., 2018; Zhang et al., 2019).

Nevertheless, nowadays gaming culture is not only limited to the consumption of individual games and a reader of a review might decide to engage with a different type of medium. An increasing number of consumers engage with videos of and about video games, either live or pre-recorded. A subcategory of these videos can be referred to as "Let's Plays" in which a content creator is recording gameplay and offers commentary to the events of the game. While a common definition is lacking, Let's Plays are attributed to be explorative and casual in their nature with a primary focus on the narrator as an entertainer (Törhönen et al., 2020). Viewers of Let's Plays are not considered as passive media consumers but become part of a new social aspect of gaming in which the viewer interacts in a virtual community and experiences close relationships with the content creator. This is caused by the possibility to establish team effort perceptions through providing hints and sharing opinions over comments (Fjællingsdal, 2018). Such a participatory culture, for both Let's Plays and games, has been positively associated with increased purchases of games, positive emotions of players, and their continuous intention to engage with a game (Bartsch, 2012; Klimmt et al., 2006; Sokolova & Kefi, 2020). These interactions serve as an illusionary connection with a medium character and are referred to as parasocial interactions (Horton & Wohl 1956) which can also further influence the intention to continuously engage with a game (Wan et al., 2017).

Considering the process of consumers' decision making and varying experiences per medium the objectives of the current study are threefold. First, the importance of Let's Plays within the video game community and their affordance of participation and interaction perceptions lead to the interest to compare these unique perceptions with the experiences that are felt during the interaction with a video game and how they influence continuation intentions. Secondly, reviews and their impact on intentions to play, anticipations, and experiences during the media consumption are considered due to their power to influence readers based on the direction of their valence. Lastly, the information adoption of reviews is studied and to what extent their effects persist after feeling varying experiences per medium. This is done to understand the decision to continuously play a game while considering the comprehensive influences on intentions ranging from the first exposure until own experiences have been made. These objectives lead to the following research question:

- *R1:* How do media experiences after playing a game compared to watching a Let's Play influence the continuation intention of consumers?
- *R2:* How does review valence influence intentions to play and anticipation before the media interaction and subsequently the experiences during the media interaction?
- *R3:* How do reviews and varying experiences during the media consumption interrelate to influence the continuation intention of consumers?

By doing so, the study extends the current knowledge of decision-making processes within the video game domain and is investigating the preceding influences of reviews to close theoretical gaps in the effects of varying media. Findings could provide marketers with advice on how to use game reviews to influence decision making processes but can also help game developers to understand how to utilize different elements to influence perceived enjoyment and engagement of their target group.

#### 2. Theoretical framework

To understand the decision-making process to continuously engage with a game after being exposed to reviews and varying types of media, the following section will elaborate on different theoretical and conceptual developments. First, different experiences and their influence on continuation intentions are discussed with a focus on how they differ per medium. To do so, the positive effect of enjoyment and engagement on continuation intention will be reviewed, followed by the positive effects of parasocial interaction perceptions with a media character. Subsequently, the preceding amplifying impact of review valence on these experiences and prior intentions, and anticipations will be discussed. The resulting conceptual model used in this study is proposed in Figure 1.



Figure 1. Conceptual model of the conducted study

#### 2.1 Game experiences during the media consumption

Understanding the complexity of perceived engagement and enjoyment of video games and corresponding Let's Plays is important to understand why players choose to continue to play a game while others stop engaging with it. During the interaction with entertainment media, consumers oftentimes experience feelings of engagement and enjoyment. Engagement in video games can be classified as the occurrence of deep immersion into the experience and feelings of being physically or mentally present in the ongoing activities of the game (Wolf & Perron, 2013). Such an increased engagement positively influences enjoyment perceptions, which are physiological, affective, and cognitive experiences that go beyond simple feelings of pleasure during the media consumption (Vorderer et al., 2004).

Experiencing enjoyment and engagement can be influential determinants on future behavioural intentions beyond the media consumption. Generally, the expectation to feel positive emotions during a media interaction has been identified as parts of main motivations to play video games. For instance, Lee (2009) extended the frequently used theory of planned behaviour within the context of online games and found significant influences of engagement and enjoyment experiences on attitude and intention formations which subsequently influenced participants' intentions to play online games. However, these feelings also influence the intention to continuously play a game. A theory aimed to explain such an influence is the uses and gratification theory. This theory explains the decision of consumers to engage in one medium over the other based on their individual needs and resulting motivation to experience gratifications such as enjoyment and engagement (Blumler & Katz, 1974; Rubin, 2002). Research has applied this theory to video games and identified the importance of hedonic gratifications as main influences on continuation intentions to play a game (e.g., Wu et al., 2010; Li et al., 2015). Based on findings, consumers who expect to feel pleasure in the form of enjoyment and engagement continuously

seek out the same experience in order to satisfy their need to be entertained (i.e. hedonic gratification). Therefore, engagement and enjoyment can increase consumers' intentions to play a game, however, they also go beyond initial desires and persist as influences on future behavioural intentions.

Nevertheless, games and Let's Plays offer different ways to afford engagement and enjoyment based on varying motivations and levels of interactivity. Video games are oftentimes sought out based on the motivation to escape reality, set own goals, autonomy, epistemic curiosity of learning something new, and the ability to socialize (Koo, 2009; Przybylski et al., 2010). Similarly, watching video game content was explained by the need of viewers to fulfil their hedonic gratification needs (Sjöblom & Hamari, 2016). While the initial study focused on live Twitch streams, the nature of Let's Plays to inform and entertain people through interaction with an audience relates to the same core gratifications as live participation.

Within games, these motivations can be expected to be fulfilled to a higher extent than a Let's Play due to their increased interactivity, which has been shown to positively affect engagement of consumers (Tamborini & Bowman, 2010). While the specific elements that afford interactivity are lacking a common definition, the degree of interactivity is based on a medium's ability to be responsive (Smuts, 2009). Based on these criteria, video games can be classified with a high interactivity due to their nature to facilitate feedback and direct control over a game character (Behr et al., 2015). In contrast, Let's Play videos do not lead to direct control over a character for viewers and lack the ability to provide direct feedback. Consequently, video games can be classified as a more interactive medium compared to Let's Plays, leading to higher enjoyment and engagement perceptions. However, Glas (2015) argues that viewers of a Let's Play experience a type of engagement that differs from movies in something the author calls "vicarious play". This term refers to viewers associating meaning to the content of the Let's Play based on the players comments and immerse themselves into the indirect happenings of the game (Glas, 2015). This implies that viewers of a Let's Play immerse in the game through emphasizing with the experience of the watched player, which is done to a higher extent than watching a movie or TV show, but to a lesser extent than playing a game themselves.

Therefore, it can be expected that perceived enjoyment and engagement influence the effects of participants' continuation intention after media exposure. However, these feelings are argued to differ between game and Let's Play due to their varying interactivity and affordances of enjoyment and engagement. Therefore, it is proposed that:

- *H1*: The effect of medium on continuation intention is mediated by enjoyment and engagement perceptions.
- *H2*: Participants who play a game themselves report higher enjoyment and engagement ratings compared to participants watching a Let's Play.

#### 2.2 Parasocial interaction

In addition to feelings of enjoyment and engagement, games and Let's Plays have the power to evoke feelings of connectedness and identification. Such feelings relate to a perceived parasocial interaction which was firstly proposed by Horton and Wohl (1956) and refers to consumers experiencing an illusionary interaction that is not reciprocated by the media character. Causes of these perceived interactions are argued to be based on different elements, for instance how viewers are addressed by the character (verbal and nonverbal), the perceived attractiveness and similarity, and viewers ability to emphasize with the perspectives of a media character (Hartmann & Goldhoorn, 2011). However, parasocial interaction can also be experienced with characters that do not directly address viewers due to the media characters authenticity, representativeness, and user context (Giles, 2002) As a result, perceived parasocial interaction is argued to lead to more positive emotions during the interaction. This is caused by complimentary emotions experienced through the perceived interaction, which can in turn influence consumers continuation behaviour (Bartsch, 2012; Klimmt et al., 2006; Sokolova & Kefi, 2020).

Within Let's Plays, less research has been done regarding the perceived parasocial interaction of viewers. However, studies focusing on the effects of parasocial interactions with YouTube content creators concluded that these content creators are perceived to be more similar to viewers who actively seek out their content, leading to an increased purchase intention of the discussed product (Sokolova & Kefi, 2020). While the initial study established these findings with viewers within a beauty-video community, it can be assumed that individuals who seek out Let's Plays can associate themselves with the Let's Player due to similar interests in the game. In addition, perceived empathy with the experiences of a Let's Player based on their commentary and actions were argued to be associated with an increased engagement of the viewer (Glas, 2015). Reasons for this are the nature of Let's Play's to afford an increased responsiveness and closer interaction with viewers, for instance through comments and social media interaction leading to the development of parasocial relationships with the Let's Player (Kreissl et al. 2021). While parasocial relationships are conceptually different from parasocial interactions, the repeated experience of parasocial interactions can lead to the formation of such a relationship that goes beyond single interactions perceptions (Dibble et al., 2015). Consequently, it can be argued that the high interactivity and perceived similarity with Let's Players based on similar interests and increased engagement can lead to perceived parasocial interactions.

These parasocial interactions are oftentimes based on watching a media character but can also be perceived with game characters themselves. However, the user context of playing games and possible affordances on the perception of parasocial interactions have been distinguished from other entertainment media due to players controlling the game character instead of passively being addressed by it. This affects players' perception of being part of a character through the embodiment of the player within a game world (Jin & Park, 2009). According to Jin (2010), this embodiment of video game avatars in virtual environments and the players direct control leads to increased engagement perception. Reasons for this are the focus of attention on the avatars actions which consequently establishes the construction of a player's "self" within the game. In addition, players do not only project their self into the character but also experience the consequences for the avatar as their own, influencing players attachment and enjoyment of the experience (Lewis et al., 2008). However, for parasocial interaction to occur it is argued that the game character has to maintain individual attributes that separate them from the player to allow for the experience of a perceived interaction as opposed to complete control over an avatar (Kavli, 2012). Thus, avatars within a game can induce feelings of parasocial interactions that differ from more passive interaction perceptions found in less interactive media. Nevertheless, both media types can lead to the same experiences of one-sided illusionary interaction that influence media consumption experiences (i.e. enjoyment and engagement) but also future behavioural intentions.

Considering the existing literature on how Let's Players and video game characters can evoke the feelings of parasocial interactions and their positive effects on continuation intentions, enjoyment, and engagement, it was hypothesized that:

- *H3a:* The perceived parasocial interaction with the medium character positively influences perceived enjoyment and engagement.
- *H3b:* The perceived parasocial interaction with the medium character positively influences participants' continuation intention.

#### 2.3 Impact of reviews

Consumers oftentimes refer to reviews before engaging with a product and deciding to purchase it, caused by consumers' tendency to seek out the experiences of others who are perceived as more credible than advertisers (Ludwig et al. 2013). Reviews are considered as electronic word of mouth (eWOM) which are external cues that form consumers intentions, expectations, and experiences during a consumption (Sen & Lerman, 2007; Shedlosky-Shoemaker et al., 2011). For instance, studies have found increased sales and intentions to play games due to the impact of positive reviews. In a study with a sample of over 1400 video games and their corresponding sales ratings, positively toned professional game reviews increased sales and associated game quality ratings of readers (Cox & Kaimann, 2015). Similar effects were found by Zhu & Zhang (2006) who studied the effects of consumer ratings on sales within the gaming industry and established a positive link between a one-point increase in consumer ratings with a four percent increase of overall sales. These effects do not only influence sales rating directly but have also been observed for intentions to play a game based on positive eWOM (Choi et al., 2018).

The direction of these effects significantly depends on the reviews' valence, which are caused by changes of the messages' persuasiveness and subsequent perceived credibility, product attitudes, and purchase intentions (Wang et al., 2015). However, research studying the impact of review valence has reported inconsistent findings regarding their effects due to a high number of studies concluding a negativity bias. A negativity bias of negative reviews relates to human's natural tendency to avoid risks, referred to as risk aversion (Vaish et al., 2008). Consequently, readers of a negative review are more likely to avoid the reviewed product if the content is negative compared to the likelihood of engaging with a product after reading a positive review. While some studies reported such increased effects of negative reviews compared to positive ones (Lee et al., 2009; Willemsen et al., 2011), other studies did not conclude a negativity bias. Wu (2013) aimed to explain these inconsistent findings and concluded that a negative review leads to a negativity bias if the prominent tone of comparable reviews is positive, however, if the majority

of simultaneously presented reviews is negative, a positive review will in turn receive increased attention and lead to a contrasting positivity bias. Based on these findings the author highlighted the importance of considering the context surrounding the review exposure leading to the need of controlled experiments. Therefore, it can be expected that the exposure to a game review that is exclusively negative, neutral, or positive will increase readers' attention towards the valence and subsequently make them more susceptible to their effects.

In addition to the focus of attention, the effects of review valence differ between utility and hedonic products. While review valence affects both types of products, the reasons for these effects differ per product type. Ren and Nickerson (2018) concluded that reviews of utility products influence readers purchase intentions through changed quality and usability perceptions while hedonic experiences are mainly influenced through changes in perceived emotions and engagement evoked through reviews. Review readers of hedonic products oftentimes attributed the provided information to the subjective experience of the reviewer compared to utility related reviews, for which the information was attributed to more objective product related features, leading to a missing negativity bias for hedonic products (Sen & Lerman, 2007). In addition, reviews about hedonic products are actively sought out by consumers due to the nature of entertainment products to be surrounded by a high amount of competition. Consequently, consumers are experiencing increased uncertainty before making a purchase decision and are therefore more receptive to the effects of review valence (Choi et al., 2018). While research is still in discussion about the extent to which hedonic media is prone to a negativity bias, findings imply that readers of a review about entertainment media seem to rely more on reported experiences but are aware that the information relates to subjective opinions of the writer. Consequently, the awareness that reviews of hedonic products like video games are based on subjective evaluations lead to the expectation that readers will not be prone to an increasing negativity or positivity bias. Instead, positive and negative reviews are expected to amplify readers to the same extent.

#### 2.3.1 Anticipations

The previously discussed influences of review valence relate to the developed attitudes and anticipations based on the provided information in the review. A study by Huang and Korfiatis (2015) found that review valence influenced participants' engagement of a hedonic app application, however, negative reviews were more influential on participants' attitude formation than positive reviews. This effect was based on the reviews influence on the emotional state of readers for which negative reviews were argued to induce a negative mood and critical first impression of the app. Similarly, a study investigating the effect of review valence and credibility on movie evaluations also concluded that a negatively toned review decreased involvement and resulting enjoyment perceptions of the movie which was discussed to be caused by low expectations after reading a negative review (Jacobs et al., 2015).

Such outcome expectations relate to previous anticipations of consumers before engaging with an activity or product. Two dimensions of such an anticipation of consumption have been attributed by Polegato and Bjerke (2019). The dimensions involve information gathering activities about an event which in turn create anticipations. The authors argue that these developed

anticipations, based on expectations evoked through the information gathering event, can predict the corresponding satisfaction post-experience. In other words, it can be argued that consumers gather information through a review source and subsequently develop expectations that influence the readers' experience once they interact with a product. Such expectations were not only found to influence experiences during the interaction but also changed motivations, intentions to play a game, the duration of playtime, and players' loyalty towards a game (Boyle et al., 2012; Crutzen et al., 2016). Theories explaining these outcomes are the theory of planned behaviour and the expectation and confirmation theory. The theory of planned behaviour has been used to explain the engagement with leisure time activities for which attitudes, subjective norms, and perceived control were attributed to be main determinants of behavioural intentions (Ajzen & Driver, 1991). Lee (2009) applied this theory to the intention to play online games due the characteristics of games to evoke varying attitudes that influence players' evaluations of games, but also the nature of gaming communities to prescribe social norms, and the need to possess necessary skills to play (online) video games. Results showed that attitudes had a higher effect on intentions to play than subjective norms and perceived control. This implies that the anticipations after reading a review influence attitudes and following behavioural intentions. Moreover, based on the expectation and confirmation theory consumers are more likely to align developed beliefs and anticipations about a product or service with their evaluation after the consumption (Oliver, 1980). Within video games, such attitudes can be expected to relate to the developed anticipations based on external information cues if the consumer is unfamiliar with the game. Therefore, it can be assumed that the previously developed anticipations will influence the enjoyment and engagement perception after the media consumption in order to uphold readers' beliefs.

Considering the previously discussed literature, review valence is expected to influence intentions, anticipations, and experiences during the media interaction directly, but are also further influencing consumers' experiences and intentions indirectly through their developed anticipations. Therefore, the following hypotheses were formulated:

- *H4a*: The presence of a positive review will positively influence participants' intention to play compared to a neutral and negative review while a negative review will negatively influence participants' intention to play compared to a neutral and positive review.
- *H4b*: The presence of a positive review will positively influence participants' anticipation compared to a neutral and negative review while a negative review will negatively influence participants' anticipation compared to a neutral and positive review.
- *H4c*: The presence of a positive review will positively influence participants' enjoyment and engagement perceptions compared to a neutral and negative review while a negative review will negatively influence participants' enjoyment and engagement perceptions compared to a neutral and positive review.
- *H5a*: The effect of review valence on intentions to play is mediated by participants' anticipation.

*H5b*: The effect of review valence on perceived enjoyment and engagement is mediated by participants' anticipation.

#### 2.3.2 Moderating role of review trustworthiness

A factor influencing the previously discussed effects of reviews is the information source and its associated trustworthiness. Trust in reviews is influenced by different factors, for instance source credibility, usefulness, social relation with the reader, and visual cues (Teng et al, 2016). These factors consequently influence the acceptance and effectiveness of reviews and guide consumers' decision-making process, which has been conceptualized by O'Reilly et al. (2016). The authors established a sequential process during which trustworthiness has to be perceived by consumers before assessing the additional steps necessary to make a product decision. These additional steps relate to the reviewer's similarity to the consumer and the match of the review content with the intended use of the product. Consequently, a higher perceived trustworthiness of eWOM like reviews can lead to an increased intention to adopt the information provided in the review and subsequent purchase intentions (Khwaja & Zaman, 2020; See-To, & Ho, 2014; Van der Heijden et al., 2003). While these studies have predominantly focused on the effects of review trust itself, there is a lack of research on varying review valence and associated trustworthiness, especially in regard to hedonic media.

Existing studies have found increased importance of review trust within gaming communities. consumers of hedonic products to be characterized as active seekers of subjective experiences and recommendations of reviewers, especially within online communities that are oftentimes associated within the gaming industry. Active reviewers of such online communities within the gaming industry are commonly associated to be more credible caused by a large number of remaining community members to be classified as "lurkers". These lurkers tend to solely consume provided information instead of creating it themselves. Consequently, the associated credibility of active users in forums positively influenced perceived trustworthiness of reviewers in the gaming community (Yang et al., 2012). Within these communities, perceived trustworthiness can be assumed to play a more dominant role when building up expectations and intentions to engage with a hedonic product when compared to utility products due to the increased uncertainty of entertainment media and subsequent dependence on reviews as discussed by Choi et al. (2018). In addition, hedonic products are primarily expected to evoke feelings of being entertained by a specific medium, therefore it can be assumed that consumers trust in reviews, especially within forums that are recognized by members of the gaming community, influences the effects of anticipation and perceived emotions in the subsequent engagement of the activity.

These influences of trust perceptions lead to the following hypotheses:

- *H6a*: The perceived trustworthiness of reviews amplifies the effects of valence on participants' intention to play.
- *H6b*: The perceived trustworthiness of reviews amplifies the effects of valence on participants' game anticipation.

*H6c*: The perceived trustworthiness of review amplifies the effects of valence on participants' perceived enjoyment and engagement.

#### 3. Methods

#### 3.1 Design

The aim of this study was to investigate the difference between playing a game and watching a Let's Play of the corresponding game after being exposed to reviews. The first part of the study focused on the effects of review valence and their perceived trustworthiness on intention to play, anticipation, enjoyment and engagement. The second part of the study further investigated the effects of playing a game or watching a Let's Play on enjoyment, engagement, their perceived parasocial interaction and how these elements influence the subsequent continuation intention of participants. In order to understand these relationships, an online 2 (medium: game vs. Let's Play) x3 (review: negative vs. neutral vs. positive) between-subjects experimental design was created resulting in six conditions (Table 1).

#### Table 1.

#### Distribution across conditions

	Review					
Medium	Negative	Neutral	Positive			
Playing game	N = 46	N = 38	N = 34			
Let's Play	N = 64	N = 40	N = 42			

#### 3.2 Procedure

The study was performed using a web-based survey platform called "Qualtrics". Two 25 Euro gift cards were raffled among all responses. Participants were informed about the purposes of the study and asked to fill out an informed consent form. This form informed participants about their rights as a participant, a privacy statement and emphasized that participation is voluntary and can be terminated at any time. After agreement, participants were briefed to imagine that they found a review about a game they are unfamiliar with, which they will read before engaging with the game. This briefing was followed by a review that was randomly presented in the form of either a positive, neutral, or negative review. The neutral review consisted of the same information as the positive and negative review but was lacking any evaluative statements. After reading the review, participants were asked to fill out the first part of the survey measuring the perceived trustworthiness of the previously read information, their anticipation, intention to play, and whether participants were familiar with the game. At the end of the first part, participants were informed about the following procedure. It was emphasized that participants do not have to complete the game and are still eligible to answer the remaining survey questions. Subsequently, participants were randomly assigned to the Let's Play or gaming condition and were redirected to either a YouTube video containing the Let's Play or to a website enabling participants to play the game in an HTML browser. After completion, participants were asked to complete the second part

of the survey consisting of items measuring perceived enjoyment, engagement, parasocial interaction, and continuation behaviour. Lastly, demographics were collected and average gaming frequency per month was assessed on a 5-point Likert scale ranging from "Never" to "Every day". At the end, participants were provided with the possibility to enter their email to enter a gift card and were thanked for their participation. Valid responses were analysed in the statistical software program SPSS.

#### 3.3 Participants

Participants were recruited through convenience and snowball sampling on relevant social media channels within the gaming community, namely Reddit and Facebook gaming groups. The groups revolved either around Let's Plays/Twitch streams, Indie games, web games, game development and design, or gaming in general without a specified focus. In total (N = 2678) responses were collected, out of which (N = 264) were assessed as valid. Responses were assessed as valid based on the time spent on stimulus pages, time spent on the complete survey, and whether the control question was answered correctly. A time duration of 2.5 minutes was chosen as an appropriate time frame spent on the game or Let's Play due to the game not changing its gameplay after that timeframe and allowing participants to develop an appropriate impression of it. Additionally, all responses that were completed in less than eight minutes were not expected to be filled out earnestly, therefore leading to the removal of these responses. The control question was used as an exclusion criterion because it asked whether participants played a game, watched a Let's Play, watched a movie, or listened to a podcast. There were no hidden elements in the study, consequently wrong responses were expected to be based on a lack of engagement with the stimulus. Besides these fixed criteria, four responses were removed due to participants being younger than 16 and two responses were removed because the same email was entered to win a gift card, leading to the suspicion of repeated responses. To provide a rich sample size consisting of different demographics, no target group was specifically excluded.

Out of all valid responses, the majority was male (59.8%), with female responses attributing 37.5%, and 2.7% choosing "other". Participants' ages ranged from 16 to 66 years (M = 25.95, SD = 7.35) with an average gaming frequency per month of everyday (45.6%) followed by a few times a week (38.0%). 3.4% reported to never play games while one response was missing. Most common nationalities represented in the responses were German (39.8%), American (23.9%), and Dutch (9.1%). All other responses were distributed across 25 different nationalities. An overview of participant characteristics per condition can be found in table 2.

#### Table 2.

				Review		Mee	dium
Variable	Categorization	Total	Negative	Neutral	Positive	Game	Let's Play
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age*		25.95 (7.35)*					
Gender							
	Male	158 (59.8%)	65 (41.1%)	49 (31.0%)	44 (27.9%)	72 (45.6%)	86 (54.4%)
	Female	99 (37.5%)	41 (41.4%)	29 (29.3%)	29 (29.3%)	44 (44.4%)	55 (55.6%)
	Other	7 (2.7%)	4 (57.1%)	1 (14.3%)	2 (28.6%)	3 (42.9%)	4 (57.1%)
Nationality							
	German	105 (39.8%)	41 (39.1%)	37 (35.2%)	27 (25.7%)	40 (38.1%)	65 (61.9%)
	American	63 (23.9%)	28 (44.4%)	15 (23.8%)	20 (31.8%)	26 (41.3%)	37 (58.7%)
	Dutch	24 (9.1%)	9 (37.5%)	7 (29.2%)	8 (33.3%)	13 (54.2%)	11 (45.9%)
	Other	72 (27.3%)	32 (44.4%)	20 (27.8%)	20 (27.8%)	40 (55.6%)	32 (44.4%)
Gaming							
frequency							
per							
month**							
	Every day	120 (45.6%)	45 (37.5%)	41 (34.2%)	34 (28.3%)	57 (47.5%)	63 (52.5%)
	A few times a	100 (38.0%)	49 (49.0%)	26 (26.0%)	25 (25.0%)	39 (39.0%)	61 (61.0%)
	week						
	A few times a	22 (8.4%)	7 (31.8%)	5 (22.7%)	10 (45.5%)	14 (63.6%)	8 (36.4%)
	month						
	Once a month	12 (4.6%)	5 (41.7%)	3 (25.0%)	4 (33.3%)	4 (33.3%)	8 (66.7%)
	Never	9 (3.4%)	3 (33.3%)	4 (44.4%)	2 (22.2%)	5 (55.6%)	4 (44.4%)

\*For age only a grand mean and standard deviation is reported

\*\*one response missing

#### 3.4. Stimuli

#### 3.4.1 Game

The game that was selected for this study and the corresponding Let's Play had to fulfil certain criteria based on the aim and context of the study. To compensate for the lack of control that would have been achievable in an offline study, a game had to be selected that allowed for appropriate results after only a short period of play and watch time, meaning that a participant must experience all core game elements within the first few minutes to assess their effect on participants' continuation intention. Results of the game also had to ensure a comparative value, therefore it was compulsory for the gameplay to be linear. In other words, participants and Let's Player were required to follow the same levels and storyline without any deviation. In addition, accessibility issues had to be minimized, meaning that the game had to be freely available without requiring a download to decrease the drop-out rate of participants. Lastly, games without a tutorial had to be excluded due to their potential to frustrate participants, consequently leading to a study drop-out.

As a result, the game "Cute Army: A Cat Story" on itch.io was selected, however for the final study the website crazygames.com was used due to the website containing an updated and improved version of the game. In addition, itch.io provided positive claims above the gaming window that might have biased participants expectations about the game. These websites offer participants a way to play a game without increased effort and can thereby reduce potential drop-

out rates. Moreover, the provided games are oftentimes highly accessible to different groups of players and can result in diverse and meaningful study samples. The selected game can be classified as a linear action-based survival game. The game provides a tutorial and requires the player to play as a cat who has to save so-called "Cuties" without being caught by his father. Core game mechanics include different levels, stealth elements, for example restricted doors and cameras that notify the cat's father, gaining experience points, and achievements. While the game becomes increasingly more difficult as the player processes, the goal and core game mechanics remain the same, which facilitates participants to experience the central elements of the game regardless of game completion. In total, the average play time consisted of 8.72 minutes (SD = 11.00).

#### 3.4.2 Let's Play

For the Let's Play different content creators were sought out who have experience in making Let's Play or reported to regularly create content on the streaming platform Twitch. These Let's Players received multiple instructions. First, Let's Players were asked to record a video of 10 minutes with a margin of approximately one minute, and to introduce and conclude the video like a classical Let's Play. Second, the video was required to include the Let's Players recorded webcam and the content that should address viewers directly in order to assess perceived parasocial interaction of the participant. In addition, it was emphasized that the Let's Players should remain neutral towards the game to avoid biased findings in relation to the previous exposure of the positively or negatively toned reviews. Based on these requirements, four Let's Plays were received. These Let's Plays were analysed based on their compliance and frequency of addressing the viewer. As a result, a Let's Play was selected with a video duration of 10m55s and was uploaded on a YouTube channel that was only accessible through the video link. In addition, comments and likes were disabled to not influence participants in the viewing condition. Consequently, an average viewing time of 10.18 minutes (SD = 6.58) was recorded for participants viewing the Let's Play. Figure 2 shows a screenshot of the Let's Play condition in comparison to the game condition.



Figure 2. Screenshot of the game (left) and the Let's Player playing the same game (right)

#### 3.4.3 Review

For the review condition, a description of the game was created by the researcher, inspired by different existing reviews of other games of the same genre on IGN (https://www.ign.com/). It was identified that reviews commonly cover the game setting, mechanics, genre, visuals, and sound, therefore these elements were chosen to be addressed in the newly created reviews. Based on these elements, a positive and negative review was adapted which stated the same information but included evaluative adjectives to ensure a comparative ability. For instance, "The stealth adventure game" (neutral) was changed to "The entertaining stealth adventure game" (positive review) and "The boring stealth adventure game" (negative review). To increase realism, all reviews were edited in Photoshop and presented as a screenshot of the review website IGN. As a result, all three reviews allowed for controlled and comparable measurements due to their similarity in length, content, and complexity.

These reviews were tested in a pre-test based on their ability to connote positive or negative expectations based on their tone. In addition, one neutral text was created without any evaluation about the game. Participants were told that they will rate three different reviews out of which one will be used for the final study to avoid biased responses by explaining the real context of the study. Consequently, they were asked to give grades on a scale from 1-10 on the game as it was described in the review. Moreover, they were asked to describe what was noticeable in the presented review and whether it can be perceived as realistic. The order of the presented reviews was randomly selected.

In total eight participants ( $M_{age} = 23$ ; Gender: 75% female, 25% male) each evaluated three reviews, leading to 24 rated reviews in total. The results support the aim of the reviews to influence expectations based on tone. The game as described in the positive review received an average grade of a 7.8, while the game in the negative review received an average grade of a 4.3. The game in the neutral review received an average grade of a 6.4. All participants successfully identified the positive, negative, and neutral tone of the review. Moreover, the content of the positive and negative review was assessed as realistic while the neutral review was described as unrealistic due to missing evaluative statements. However, this finding was in line with the aim of the neutral review to only contain descriptive information. Therefore, the reviews showed to successfully connotate different expectations based on their tone. The final reviews can be found in (Appendix A).

#### 3.5 Measurements

The questionnaire consisted of seven scales which measured the dependent variables. All responses were recorded on a 7-point Likert scale ranging from "strongly agree" to "strongly disagree". Familiarity with the game was controlled by asking participants whether they have played the game before. At the end of the study participants were asked in a control question whether they played a game, watched a Let's Play, watched a movie, or listened to a podcast and whether they completed the selected activity or not. Items were analysed in two separate factor analyses. One for items before the media consumption (trust, intention to play, anticipation) and

one for the factors after the media consumption (enjoyment, engagement, parasocial interaction, and continuation intention). The corresponding rotated factor matrices and Pearson correlations can be found in appendix B. Parametric properties of used measurements can be found in table 2.

#### 3.5.1 Trustworthiness

Trustworthiness of reviews was measured by five items based on Ohanian (1990), which were adapted to the context of reviews in the current study. These items include "I think the review is honest.", "I think the review is reliable.", "I don't think the review is dependable." (reverse coded), "I think the review is sincere.", and "I trust the review.". Reliability analyses showed good internal consistency ( $\alpha = .81$ ).

#### 3.5.2 Intention to play

The dependent variable intention to play was measured by five modified items based on the "Theoretical Extension of the Technology Acceptance Model" (TAM2) (Venkatesh & Davis, 2000) and items that specifically measured participant's intention to play games in a study by Koo (2009). These items are "Assuming that I have access to the game I intend to play it", "I would like to play the game", In the future I don't intend to play the game" (reverse coded), "I think it is likely that I would play the game in the future", and "If I would have the possibility to play the game, I intend to play it". Reliability analyses showed excellent internal consistency ( $\alpha =$ .93).

#### 3.5.3 Enjoyment and engagement

Perceived enjoyment during media consumption was measured by six items based on a shortened version of the frequently used Intrinsic Motivation Inventory (IMI) (Ryan, 1982). Adopted items were "I enjoyed doing this activity very much", "This activity was fun to do", "I thought this was a boring activity" (reverse coded), "This activity did not hold my attention at all" (reverse coded), "I thought this activity was quite enjoyable", and "I felt pleasure while doing this activity". The selected items were chosen to not be rephrased in order to be applicable for both media consumption conditions (Let's Play and playing game).

Perceived engagement was measured by six items based on a shortened version of the Game Engagement Questionnaire (GEQ) (Brockmyer et al., 2009). Due to the original questionnaire exclusively focusing on the experience of participants playing games themselves, items were partly rephrased to also fit to the Let's Play condition. As a result, used items were "During the activity I lost track of time", "Experiencing the activity seems to have happened automatically", "I felt like I couldn't stop the activity", "I really got into the activity", "I engaged in the activity longer than I meant to", and "This activity was engaging".

Based on the rotated component matrix of the factor analysis, two engagement factors showed higher factor loadings for the enjoyment construct ("I really got into the activity" (engagement factor 4), "This activity was engaging" (engagement factor 6)). However, the two engagement factors in question still showed factor loadings for both the enjoyment and the engagement construct, therefore four reliability analyses were applied to assess the corresponding

Cronbach Alpha's. While changing the constructs as suggested by the factor analysis would have increased the enjoyment construct from an alpha of .93 to an alpha of .95, it also decreased the engagement alpha from a .90 to a .83. Moreover, the reliability analysis of engagement revealed the highest decrease in reliability if the suggested items were removed. Consequently, it was decided to retain the scales as previously intended to ensure an excellent Cronbach's Alpha for both constructs (enjoyment  $\alpha = .93$ ; engagement  $\alpha = .90$ ).

#### 3.5.4 Anticipation

In order to compare participant's anticipations before the media consumption with game experiences after the media consumption, anticipation items were based on the same items measuring perceived enjoyment and engagement scales but reformulated to measure their expectations after the review exposure. As a result, the seven adapted items were "I expect the game to be fun", "I expect the game to be enjoyable", "I expect to like the game", "I expect to feel pleasure while engaging in the game", I expect the game to be engaging", "I expect the game to make me feel involved", and "I expect time to pass faster while engaging with the game". Reliability analyses showed excellent internal consistency ( $\alpha = .93$ ).

#### 3.5.5 Parasocial interaction

Parasocial interaction was measured by five items based on a combined version of the experience of parasocial interaction scale (EPSI) of Hartmann and Goldhoorn (2011) and the audience-persona interaction scale (Auter & Palmgreen, 2000). The EPSI scale has been chosen as a refined version of the commonly used PSI-scale of Rubin and Perse (1987), which has been criticized for prominently focusing on parasocial relationships instead of perceived interaction, leading to methodological confusion (Dibble, Hartmann, & Rosaen, 2015). The audience-persona interaction scale was added due to the influence of perceived identification and relatedness with a media character on parasocial interactions (Auter & Palmgreen, 2000). Items were adapted to the varying conditions of the study to avoid confusion. The Let's Play condition included "I had the feeling that the Let's Player was aware of me", "I had the feeling that the Let's Player knew I paid attention to her", "I felt sorry for the Let's player when she made a mistake", "I hoped the Let's player would achieve her goals", and "I can identify with the Let's player". The game condition included the same items with slight changes "I had the feeling that the main character (cat) was aware of me", "I had the feeling that the main character (cat) knew I paid attention to him", "I felt sorry for the main character (cat) when he made a mistake", "I hoped the main character (cat) would achieve his goals", and "I can identify with the main character (cat)". Reliability analyses showed good internal consistency ( $\alpha = .83$ ).

#### 3.5.6 Continuation intention

The dependent variable, continuation intention aimed to measure intended continuation to play the game and game creator support. This scale was measured by nine items. Items related to continuation to play were based on the previously used intention to play measures and include "Assuming that I have access to the game I would continue to play it", "I would like to continue to play the game", and "I think it is likely that I would continue to play the game in the future", and "If I have the possibility, I want to continue to play the game". In addition, the item "I would look for other games of the game creators" was added. Game creator support was measured by items based on the behavioural intention scale, originally relating to donation behaviour (Ranganathan & Henley, 2008). These items were adapted to content creator support and resulted in "I would recommend the game to others", "I would be likely to financially support the creators of the game", If the game wouldn't be free, I would pay for it", and "I'm likely to donate money to the creators of the game".

Initially, the dependent variable was expected to consist of a scale measuring the continuation intention to play, and a scale measuring game creator support. However, the corresponding factor analysis only showed factor loadings for one combined scale. Therefore, the items were combined into one dependent variable scale measuring the overall future behavioural intentions of participants. The resulting construct showed excellent reliability ( $\alpha = .96$ ).

#### Table 2.

Psychometric properties of measurements.

Scale	Item	Factor	Mean (SD)	Variance
		Loading		
Trust ( $\alpha = .81$ )			5.04 (.77)	.59
	I think the review is honest	.83	5.72 (.90)	.81
	I think the review is reliable	.78	5.41 (1.04)	1.07
	I don't think the review is dependable (reverse coded)	.56	3.08 (1.11)	1.24
	I think the review is sincere	.74	5.61 (.94)	.89
	I trust the review	.78	5.35 (1.06)	1.13
Anticipation ( $\alpha = .93$ )			4.98 (.67)	.45
	I expect the game to be fun	.83	5.39 (1.09)	1.19
	I expect the game to be enjoyable	.84	5.45 (1.10)	1.21
	I expect to like the game	.77	5.17 (1.14)	1.29
	I expect to feel pleasure while engaging with the game	.80	5.27 (1.10)	1.21
	I expect the game to be engaging	.83	5.22 (1.11)	1.23
	I expect the game to make me feel involved	.77	5.23 (1.14)	1.28
	I expect time to pass faster while engaging with the game	.66	5.46 (1.05)	1.11
Intention to play ( $\alpha = .93$ )			4.56 (1.14)	1.31
	Assuming that I have access to the game, I intend to play it	.72	5.08 (1.29)	1.67
	I would like to play the game	.67	5.08 (1.31)	1.72
	In the future I don't intend to play the game	.79	2.69 (1.29)	1.67
	I think it's likely that I would play the game in the future	.66	4.79 (1.26)	1.60
	I would have the possibility to play the game, I intend to play it	.74	5.15 (1.31)	1.72
Enjoyment ( $\alpha = .93$ )			4.60 (1.06)	1.13
	I enjoyed doing this activity very much	.75	5.12 (1.27)*	1.62*
	This activity was fun to do	.75	5.27 (1.30)*	1.70*
	I thought this was a boring activity (reverse coded)	.81	2.90 (1.33)*	1.76*
	This activity did not hold my attention at all (reverse coded)	.81	3.01 (1.29)*	1.67*
	I thought this activity was quite enjoyable	.77	5.23 (1.27)*	1.61*
	I felt pleasure while doing this activity	.69	5.06 (1.27)*	1.60*
Engagement ( $\alpha = .90$ )			5.00 (1.02)	1.04
	During the activity I lost track of time	.74	4.84 (1.17)*	1.37*
	Experiencing the activity seems to have happened automatically	.66	5.09 (1.12)*	1.25*
	I felt like I couldn't stop engaging in the activity	.51	4.52 (1.29)*	1.65*
	I really got into the activity	.43	4.83 (1.33)*	1.76*

I engaged in the activity longer than I meant to	.52	4.83 (1.33)*	1.78*
This activity was engaging	.40	5.09 (1.30)*	1.68*
		5.10 (.96)	.92
I had the feeling that the Let's Player was aware of me**	.71	5.06 (1.33)*	1.78*
I had the feeling that the Let's Player knew I paid attention to her**	.75	5.19 (1.26)*	1.59*
I felt sorry for the Let's Player when she made a mistake**	.63	5.00 (1.10)*	1.22*
I hoped the Let's Player would achieve her goals**	.61	5.79 (.92)*	.84*
I can identify with the Let's Player**	.61	5.16 (1.21)*	1.46*
		4.66 (1.13)	1.29
Assuming that I have access to the game, I would continue to play it	.79	4.93 (1.33)	1.77
I would like to continue to play the game	.80	4.92 (1.39)	1.92
I think it's likely that I would continue to play the game in the future	.83	4.77 (1.33)	1.77
If I have the possibility, I want to continue to play the game	.80	4.84 (1.40)	1.95
I would look for other games of the game creators	.75	4.87 (1.35)	1.82
I would recommend the game to others	.68	4.87 (1.28)	1.63
I would be likely to financially support the creators of the game	.82	4.42 (1.29)	1.67
If the game wouldn't be free, I would pay for it	.75	4.28 (1.29)	1.65
I'm likely to donate money to the creators of the game	.73	4.20 (1.24)	1.54
	I engaged in the activity longer than I meant to This activity was engaging I had the feeling that the Let's Player was aware of me** I had the feeling that the Let's Player knew I paid attention to her** I felt sorry for the Let's Player when she made a mistake** I hoped the Let's Player would achieve her goals** I can identify with the Let's Player** Assuming that I have access to the game, I would continue to play it I would like to continue to play the game I think it's likely that I would continue to play the game I think it's likely that I would continue to play the game I would look for other games of the game creators I would recommend the game to others I would be likely to financially support the creators of the game If the game wouldn't be free, I would pay for it I'm likely to donate money to the creators of the game	I engaged in the activity longer than I meant to.52This activity was engaging.40I had the feeling that the Let's Player was aware of me**.71I had the feeling that the Let's Player knew I paid attention to her**.75I felt sorry for the Let's Player when she made a mistake**.63I hoped the Let's Player would achieve her goals**.61I can identify with the Let's Player**.61Assuming that I have access to the game, I would continue to play it.79I would like to continue to play the game.80I think it's likely that I would continue to play the game in the future.83If I have the possibility, I want to continue to play the game.80I would look for other games of the game creators.75I would he likely to financially support the creators of the game.68I would be likely to financially support the creators of the game.82If the game wouldn't be free, I would pay for it.75I'm likely to donate money to the creators of the game.73	I engaged in the activity longer than I meant to.52 $4.83 (1.33)^*$ This activity was engaging.40 $5.09 (1.30)^*$ I had the feeling that the Let's Player was aware of me**.71 $5.06 (1.33)^*$ I had the feeling that the Let's Player knew I paid attention to her**.75 $5.19 (1.26)^*$ I felt sorry for the Let's Player when she made a mistake**.63 $5.00 (1.10)^*$ I hoped the Let's Player would achieve her goals**.61 $5.79 (.92)^*$ I can identify with the Let's Player**.61 $5.16 (1.21)^*$ Assuming that I have access to the game, I would continue to play it.79 $4.93 (1.33)$ I would like to continue to play the game.80 $4.92 (1.39)$ I think it's likely that I would continue to play the game.80 $4.84 (1.40)$ I would look for other games of the game creators.75 $4.87 (1.28)$ I would be likely to financially support the creators of the game.68 $4.87 (1.28)$ I would be likely to financially support the creators of the game.75 $4.28 (1.29)$ I'm likely to donate money to the creators of the game.73 $4.20 (1.24)$

\* For this item only properties for the Let's Play condition are demonstrated.

\*\* See measurements for item description for the gaming condition.

#### 3.6 Data analysis

Before conducting the analyses, assumption checks were performed based on linearity, normality, independence of error, and multicollinearity. To test for a linear relationship between variables, a scatterplot was applied to see whether the independent variables predict the dependent variable. Normality was inferred by plotting variable residuals in a P-P plot to assess whether residuals follow a diagonal line. Independence of error was based on a scatterplot of residuals to see whether these residuals are randomly distributed. Lastly, multicollinearity was concluded if VIF values were above 10.00. Based on these tests, no violations were found, however, Pearson correlations showed high correlations between enjoyment and engagement scales (.80), and anticipation and intention to play scales (.71) (appendix B). Nevertheless, as all VIF values were below 3.50, analyses proceeded as planned.

Consequently, hypotheses were tested in the statistical software program SPSS. ANOVA's were applied for the categorical variable review and its effect on intention to play and anticipation, and the categorical variable medium on parasocial interaction. MANOVA's were used to test the influence of independent variables on multiple dependent variables, namely the separated effects of review, medium, and parasocial interaction on enjoyment and engagement. Other interval and ratio variables were analysed in a linear regression analysis (e.g. parasocial interaction on continuation intention). When applicable, Bonferroni testing was used to adjust for multiple testing. Hypotheses that included mediators and moderators were analysed with the Process Macro v3.5.3 extension for SPSS by Hayes for which enjoyment and engagement were measured separately due to their conceptual difference and to avoid potential issues caused by their high correlation. Lastly, the adjusted conceptual model was investigated through linear regression analysis to investigate the standardized coefficients per variable path.

#### 4. Results

An overview of all hypotheses of the study can be found in Table 4, followed by explorative analyses and an adjusted conceptual model in Figure 9.

#### 4.1 Confirmatory analysis

#### 4.1.1 Influence of medium and game experiences

One aim of this study was to investigate the impact of game experiences and varying media on participants' continuation intention. To achieve this aim, it was hypothesized that the effects of medium on continuation intention was mediated by enjoyment and engagement (H1). These experiences were expected to be higher for participants who played the game themselves compared to participants who watched a Let's Play (H2).

The potential mediation effect of game experiences on continuation intention was analysed through the Process Macro v3.5.3 by Hayes. Both models (Figure 2) testing the effect of enjoyment on continuation intention and engagement on continuation intention were significant (enjoyment:  $F(2, 261) = 100.16, p < .001, R^2 = .43$ ; engagement:  $F(1, 261) = 158.05, p < .001, R^2 = .55$ ). There was a significant effect of medium on enjoyment and engagement (enjoyment:  $\beta = -.35$ , t(262) =8.00,  $p = .005\ 95\%\ CI\ [-.62, -.11]$ ; engagement:  $\beta = -.30$ , t(262) = 5.86, p = .016, 95% CI [-.55, -.06]), and subsequently of enjoyment and engagement on continuation intention (enjoyment:  $\beta =$ .66, t(261) = 14.00, p = <.001, 95% CI [.60, .80]; engagement:  $\beta = .74, t(261) = 17.59, p = <.001, \beta = .001, \beta =$ 95% CI [.73, .92]). For both models, there was no significant total effect of medium on continuation intention (p = .067) due to opposing effects of medium on game experiences, however, both direct effects were significant (enjoyment: b = .50, t(262) = 4.66, p = < .001, 95% CI [.29, .71]; engagement: b = .49, t(262) = 5.13, p < .001, 95% CI [.30, .68]). The overall indirect effect of enjoyment as a mediator was significant and included non-parametric bootstrapping intervals of -.44 to -.08, as was the indirect effect of engagement (bootstrap intervals: -.45 to -.05). Therefore, H1 was accepted. While the negative indirect effect of enjoyment and engagement lead to the conclusion that for the Let's Play condition, the resulting media consumption experiences were lower than for the game condition, the contrary positive direct effect of these game experiences suggest that additional variables influence the mediating effect of enjoyment and engagement which are not explained by the medium alone. Nevertheless, the significant indirect effects of enjoyment and engagement show that enjoyment and engagement of the media consumption partially mediate participants' continuation intention.

To test how these enjoyment and engagement perceptions differ per medium, two oneway MANOVA's were applied. The model testing the impact of medium on enjoyment and engagement was significant (F(2, 261) = 4.03, p = .019, Wilk's  $\Lambda = .97$ , partial  $\eta^2 = .03$ ) showing that compared to watching a Let's Play, playing a game led to significantly higher enjoyment (Let's Play: M = 4.44, SD = 1.15; game: M = 4.81, SD = .91, p = .005) and engagement perceptions (Let's Play: M = 4.86, SD = 1.04; game: M = 5.17, SD = .97, p = .016). This shows that overall, the game condition evoked higher feelings of enjoyment and engagement perceptions during the media consumption compared to watching the Let's Play, leading to the acceptance of H2.



*Figure 2.* Enjoyment and engagement mediators of medium on continuation intention. Standardized path coefficients reported. Non-significant values are displayed as "n.s". \*significant at a p < .05 level or bootstrapping excluding 0

#### 4.1.2 Effects of parasocial interaction

Additional tested experiences during the media consumption were perceived parasocial interactions which were argued to increase enjoyment and engagement perceptions (H3a) but also continuation intentions (H3b). A one-way MANOVA model testing the influence of parasocial interaction on game experiences was significant (F(2, 261) = 86.74, p = <.001, Wilk's  $\Lambda = .60$ , partial  $\eta^2 = .40$ ), leading to the finding that perceived parasocial interaction increased experienced enjoyment (M = 4.61, SD = 1.06, p < .001) and engagement (M = 5.00, SD = 1.02, p < .001). Consequently, a higher parasocial interaction with the medium character increases both enjoyment and engagement. Therefore, H3a was accepted.

Furthermore, parasocial interaction was also hypothesized to directly influence the continuation intention of participants (H3b). This hypothesis was tested in a significant linear regression analysis (F(1, 262) = 212.77, p < .001,  $R^2 = .45$ ). Results show that the perceived parasocial interaction during the media consumption significantly increased participants' continuation intention ( $\beta = .70$ , t(262) = 14.59, p < .001, 95% CI [.69, .90]), demonstrating that parasocial interaction is not only influencing feelings during the media consumption itself, but is also positively influencing subsequent continuation intentions for the future. Therefore H3b was accepted as well.

#### 4.1.3 Effects of reviews

Review valence was hypothesized to influence participants intentions to play (H4a), anticipation (H4b), and enjoyment and engagement after interacting with a medium (H4c) based on the direction of their valence. A visualization of means per condition can be found in Figure 3.

A one-way ANOVA demonstrated a significant influence of review valence on intention to play ( $F(2, 261 = 4.57, p = .011, R^2 = .03$ ). Bonferroni post hoc test revealed significantly lower intentions to play ratings after reading the negative review (M = 4.35, SD = 1.15, p = .008) compared to the positive review (M = 4.86, SD = 1.03), however, there were no significant differences between the negative and neutral review (p = .632) or the positive and neutral review (p = .294). Nevertheless, findings show that reading a negative review significantly decreased intentions to play, therefore H4a was partially accepted.

Regarding anticipation, a second one-way ANOVA and Bonferroni post-hoc test also

showed significant influences of review valence (F(2, 261) = 17.30, p < .001,  $R^2 = .11$ ). In this case, a significant difference was not only measured between a negative review (M = 4.72, SD = .72, p < .001) and a positive review (M = 5.25, SD = .54, p < .001), but also between a negative and neutral review (M = 5.08, SD = .59, p < .001). However, there was no significant difference between the positive and neutral review (p = .304). Contrary to intention to play, for which only negative reviews decreased participants' intention, anticipation was significantly influenced by the positive, negative, and partially by the neutral review based on the direction of their valence, leading to the partial acceptance of H4b.

To test the effects of review valence on enjoyment and engagement after the media interaction, a one-way MANOVA was conducted. However, findings showed no significant differences between groups (p = .899, Wilk's  $\Lambda = .10$ ). Therefore, reading a review did not influence participants' enjoyment or engagement after the media consumption, regardless of valence. Consequently, H4c was rejected.



*Figure 3.* Means of anticipation, intention to play, enjoyment, and engagement per review valence. \* p < .001\*\* p = .008

#### 4.1.4 Mediating role of anticipation

Participants' anticipation was not only directly measured in relation to the effects of review valence but was also hypothesized to mediate intentions to play (H5a) and perceived enjoyment and engagement after the media consumption (H5b). To test these hypotheses, mediation analyses

were applied based on the Process Macro v3.5.3 by Hayes.

The model testing the mediation effect of anticipation on intention to play after reading a review (Figure 4) was significant ( $F(2, 261) = 136.62, p < .001, R^2 = .51$ ) and showed a significant effect of review on anticipation ( $\beta = .34, t(261) = 5.78, p < .001, 95\%$  CI [.18, .37]) and anticipation on intention to play ( $\beta = .73, t(261) = 15.98, p < .001, 95\%$  CI [1.09, 1.40]). Therefore, the indirect effect of anticipation as a mediator was also significant with non-parametric bootstrapping resulting in a 95% confidence interval ranging from .23 to .46. While the total effect of review on intention to play was significant with  $\beta = .18, t(261) = 3.01, p = .003, 95\%$  CI [.09, .42], the direct effect was insignificant (p = .170). This implies that once anticipation is added to the model, the positive relationship between review and intention to play is fully explained by the increasing anticipation after reading a review. Consequently, it can be concluded that anticipation fully mediates participants' intention to play after review exposure leading to the acceptance of H5a.



*Figure 4.* Mediation effect of anticipation of review valence on intention to play. Standardized path coefficients reported. Non-significant values are displayed as "n.s". \*significant at a p < .05 level or bootstrapping excluding 0

The same tests were performed to test a mediating role of anticipation after review exposure on enjoyment and engagement (Figure 5). For both models, a review significantly influenced anticipation ( $\beta = .34$ , t(261) = 5.78, p < .001, 95% CI [.18, .37]). This anticipation subsequently influenced perceived enjoyment and engagement during the media consumption (enjoyment:  $\beta$ =.44, t(261) = 7.44, p < .001, 95% CI [.51, .89]; engagement:  $\beta = .50$ , t(261) = 8.64, p < .001, 95% CI [.58, .93]). Consequently, non-parametric bootstrapping resulted in significant indirect effects of anticipation on enjoyment and engagement (enjoyment: CI [.12, .27]; engagement: CI [.13, .29]). Due to review values going into opposite directions, both total effects were insignificant (enjoyment: p = .687 engagement: p = .381), however, corresponding direct effects were significant (enjoyment: b = -.16, t(261) = -2.08, p = .039, 95% CI [-.31, -.01]; engagement: b = -.16.14, t(261) = -1.98, p = .049, 95% CI [-.28, -.01]). This indicates that anticipation indirectly increased the enjoyment and engagement perception of participants' during the media consumption. However, the unexpected negative value of the significant direct effect leads to the conclusion that there are additional unknown variables influencing anticipation for each increase of positivity in the review. Nevertheless, H5b was accepted due to the significant indirect effects of anticipation on enjoyment and engagement.



*Figure 5.* Mediation effect of anticipation of review valence on enjoyment and engagement. Standardized path coefficients reported. Non-significant values are displayed as "n.s". \*significant at a p < .05 level or bootstrapping excluding 0

#### 4.1.5 Moderating role of trustworthiness

Due to the findings in previous studies, trust was measured and tested based on its moderating role on the relationship between reviews on intention to play (H6a), anticipation (H6b) and enjoyment and engagement (H6c). Moderation analysis was applied based on the Process Macro v3.5.3 by Hayes.

A significant moderation effect was found for the model of trust on review and intention to play (F(3, 260) = 15.45, p < .001,  $R^2 = .15$ ) with a significant interaction effect between trust and review (b = .26, t(260) = 2.63, p = .009, 95% CI [.06, .45]). When considering the conditional effects of trust based on low, average, and high trust perceptions (see Table 3 for values), significant effects were revealed for average and high trust perceptions while low trust was insignificant. These findings suggest that, compared to low trust, average and high trust perceptions lead to an increased intention to play. Therefore, higher trust perception did not only increase participants' intention to play but also increased the explanatory power of trust on intention to play due to trust only being significant for average and high trust. Consequently, H6a is accepted. A visualization for these effects can be found in Figure 6.

#### Table 3.

Conditional effects of the trust moderator on intention to play at low, average, and high trust.							
Trust level	Effect	SE	t	р	LLCI	ULCI	
Low (4.20)	.01	.11	.09	.926	21	.23	
Average (5.20)	.27	.08	3.26	.001	.11	.43	
High (5.80)	.42	.11	3.74	.001	.20	.65	

Conditional effects of the trust moderator on intention to play at low, average, and high trust.



*Figure 6.* Visualization of the effects of low, average, and high trust in review valence on intentions to play.

The models measuring the moderation role of trust on anticipation, enjoyment, and engagement were significant (anticipation: F(3, 260) = 23.79, p < .001,  $R^2 = .22$ ; enjoyment: F(3, 260) = 8.77, p < .001,  $R^2 = .09$ ; engagement: F(3, 260) = 6.49, p < .001,  $R^2 = .07$ ), however, all unconditional effects were insignificant (anticipation: p = .063; enjoyment: p = 309; engagement: p = 364). Therefore, trust perceptions did not influence participants' anticipation or subsequent enjoyment or engagement experience during the media consumption, leading to the rejection of H6b and H6c.

#### Table 4.

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	Hypothesis	Result
H1	The effect of medium on continuation intention is mediated by enjoyment and	Accepted
	engagement perceptions.	
H2	Participants who play a game themselves report higher enjoyment and engagement ratings compared to participants watching a Let's Play.	Accepted
H3a	The perceived parasocial interaction with the medium character positively influences perceived enjoyment and engagement.	Accepted
H3b	The perceived parasocial interaction with the medium character positively influences participants' continuation intention.	Accepted
H4a	The presence of a positive review will positively influence participants' intention to play compared to a neutral and negative review while a negative review will	Partially accepted

	negatively influence participants' intention to play compared to a neutral and positive review.	
H4b	The presence of a positive review will positively influence participants' anticipation compared to a neutral and negative review while a negative review will negatively influence participants' anticipation compared to a neutral and positive review.	Partially accepted
H4c	The presence of a positive review will positively influence participants' enjoyment and engagement perceptions compared to a neutral and negative review while a negative review will negatively influence participants' enjoyment and engagement perceptions compared to a neutral and positive review.	Rejected
H5a	The effect of review valence on intentions to play is mediated by participants' anticipation.	Accepted
H5b	The effect of review valence on perceived enjoyment and engagement is mediated by participants' anticipation.	Accepted
Нба	The perceived trustworthiness of reviews amplifies the effects of valence on participants' intention to play.	Accepted
H6b	The perceived trustworthiness of reviews amplifies the effects of valence on participants' game anticipation.	Rejected
Н6с	The perceived trustworthiness of review amplifies the effects of valence on participants' perceived enjoyment and engagement.	Rejected

#### 4.2 Exploratory analysis

In addition to this model, exploratory tests based on the previous results were conducted. Findings were added to the adjusted conceptual model in Figure 9.

#### 4.2.1 Additional effects of anticipation and intention to play

The prominent role of anticipations and parasocial interaction led to the interest to test whether anticipations influence perceived parasocial interaction as well. Therefore, a linear regression with anticipation as the independent variable and parasocial interaction as the dependent variable was conducted that resulted in a significant model (F(1, 262) = 65.37, p < .001,  $R^2 = .20$ ) demonstrating that previous held anticipations increased perceived parasocial interactions ( $\beta = .45$  t(262) = 8.09, p < .001, 95% CI [.48, .79]). This result shows that higher anticipations about the expected experiences during the consumption are not only influencing these feelings directly but are also further impacting other feelings during the media consumption, in this case parasocial interaction.

In addition, the positive effect of anticipation on intention to play before the media consumption was speculated to affect the dependent variable of continuation intention as well. To test this, a second linear regression analysis with anticipation and intention to play as the independent variables and continuation intention as the dependent variable was conducted. The resulting model was significant (F(2, 261) = 117.49, p < .001,  $R^2 = .47$ ) and showed that the

previous intention to play positively influenced the subsequent continuation intention ( $\beta = .53$ , t(261) = 8.34, p < .001, 95% CI [.40, .66]), as did anticipation ( $\beta = .20$ , t(261) = 3.08, p = .002, 95% CI [.12, .54]). Moreover, intention to play as an independent variable was also tested on game experiences as a dependent variable in a one-way MANOVA. The resulting significant model (F(2, 261) = 60.00, p < .001, Wilk's  $\Lambda = .69$ , partial  $\eta^2 = .312$ ,  $R^2 = .26$ ) showed that a higher intention to play also influences perceived enjoyment and engagement during the media consumption. Consequently, the previously held intention to play does also influence the perceived enjoyment and engagement during the media consumption, however, anticipation and intention to play after reading a review does not only indirectly influence the continuation intention after the medium exposure through these perceptions of enjoyment and engagement, but also directly influences it.

#### 4.2.2 Parallel mediation of intention to play and game experiences on continuation intention

Visualizing the previous explorative finding in the adjusted conceptual model suggests a potential parallel mediation effect between anticipation on continuation intention with intention to play and game experiences as mediators which was tested using the Process Macro by Hayes.

The models (Figure 7) were significant (enjoyment: F(3, 260) = 115.85, p < .001,  $R^2 = .57$ ; engagement: F(3, 260) = 147.05, p < .001,  $R^2 = .63$ ) and showed a significant total indirect effect of intention to play and enjoyment of .68 with bootstrap intervals ranging from .50 to .86. Similarly, the total indirect effect of intention to play and engagement on continuation intention was .76 (CI [.57, .95]). Both parallel mediation models decreased the significant total effect of .97 (CI [.80, 1.14], p < .001) through the added mediators, leading to a significant direct effect of .29 (CI [.10, .48], p = .003) for enjoyment and .21 (CI [.03, .39], p = .020) for engagement. These findings suggest that in addition to the significant relationship between anticipation and continuation intention, the previous intention to play and game experiences, as positively influenced by anticipation, partly mediate their relationship.



*Figure 7.* Parallel mediation model of intention to play and game experiences on continuation intention. Standardized path coefficients reported. Non-significant values are displayed as "n.s". \*significant at a p < .05 level or bootstrapping excluding 0

#### 4.2.3 Parasocial interaction differences per medium

Furthermore, the previously reported results showed significant findings for H3a and H3b about the positive effect of parasocial interaction on game experiences and continuation behaviour. However, the hypotheses did not specifically differentiate between varying parasocial interaction perceptions per medium, therefore, a one-way ANOVA between medium and parasocial interaction was applied. The model (F(1, 262) = 10.18, p = .002,  $R^2 = .03$ ) showed significantly higher parasocial interaction ratings for participants who were assigned to the Let's Play condition (M = 5.25, SD = .88, p < .001) when compared to the gaming condition (M = 4.88, SD = 1.01, p = .002). Therefore, it can be concluded that overall, watching a Let's Play led to higher parasocial interaction ratings than playing a game.

#### 4.2.4 Parallel mediation parasocial interaction and game experiences on continuation intention

Applying these changes to the adjusted conceptual model also suggested a parallel mediation of parasocial interaction and game experiences between medium and continuation intention. The resulting models (Figure 8) based on the Haves process macro were significant (enjoyment:  $F(3, 260) = 107.61, p < .001, R^2 = .55$ ; engagement:  $F(3, 260) = 129.33, p < .001, R^2$ = .60). Both models showed significant indirect effects of game experiences (enjoyment: Effect = -.16, CI [-.28, -.04]; engagement: Effect = -.17, CI [-.32, -.03]) and parasocial interaction (enjoyment: Effect = .19, CI [.07, .33]; engagement: Effect = .14, CI [.04, .26]) on continuation intention, however, the opposing direction of effects cancelled each other out and led to an insignificant total indirect effect with bootstrap intervals including 0 (enjoyment: CI [-.18, .25]; engagement: CI [-.26, .19]). Nevertheless, the direct effect was significant and showed that game experiences and parasocial interaction positively mediate continuation intention (enjoyment: Effect = .22, CI [.02, .42]; engagement: Effect = .29, CI [.10, .48]). The total effects for both models were insignificant (p = .067) due to opposing effects of the medium variable. These models show that the Let's Play led to a higher parasocial interaction which consequently increased participants' continuation intention, however, the enjoyment and engagement perceptions were lower for the Let's Play condition and higher for the gaming condition. Therefore, both mediums have unique benefits that both led to increased continuation intentions.



*Figure 8.* Parallel mediation model of parasocial interaction and game experiences between medium and continuation intention. Standardized path coefficients reported. Non-significant values are displayed as "n.s".

\*significant at a p < .05 level or bootstrapping excluding 0

There were no additional significant findings of age, gender, activity completion, or gaming frequency per month on any variables with p-values being above .05.

#### 4.3 Adjusted conceptual model

Findings of the confirmatory and exploratory analyses were adopted into an adjusted conceptual model (Figure 9). Standardized coefficients were tested with a linear regression analysis for each link in the model, excluding the moderation effect of trust on intention to play. Insignificant links are displayed as "n.s." with p-values being above .05.



Figure 9. Adjusted conceptual model with standardized coefficients.

\*significant at a p < .05 level

\*\*only enjoyment is included in this model as a demonstration for the effect of game experiences.

#### 5. Discussion

The aim of this study was to understand the decision-making process of consumers' and the elements that influence their intention to continue to play a game after review and medium exposure. First, the impact of different game experiences of games and Let's Plays investigated based on their influence on continuation intentions of participants, namely enjoyment, engagement, and parasocial interaction perceptions. Secondly, it was investigated how review valence influences these experiences, but also how they influence preceding intentions to play and anticipations of the reviewed game. Lastly, it was investigated how these effects interrelate to influence continuation intentions.

#### 5.1 Effects of game experiences and medium

The first research question of this study focused on media experiences after playing a game compared to watching a Let's Play and how they influence the continuation intention of consumers. To answer this question, participants were asked to either play a game themselves or to watch a Let's Play of the corresponding game. Subsequently, enjoyment, engagement, and parasocial interaction perceptions were investigated on their influence on continuation intentions. Feelings of enjoyment and engagement during the media consumption managed to mediate the continuation intention of participants after they played the game and watched the Let's Play (H1). These feelings were higher for participants who played the game themselves compared to participants in the viewing condition, fulfilling expectations of H2. In addition, games and Let's Plays both contain a medium character which both evoked feelings of parasocial interaction leading to positive influences on enjoyment and engagement (H3a) but also to direct positive influences on continuation intentions (H3b).

The positive findings of higher enjoyment and engagement ratings of participants who played the game themselves are in line with findings about increased feelings of presence for interactive mediums like video games and their unique characteristics (e.g. setting own goals, autonomy to act, gaining achievements) which positively influence experiences during the media consumption (Przybylski et al., 2006; Tamborini & Bowman, 2010). However, Let's Plays also evoked feelings of engagement and enjoyment but based on different antecedents. The Let's Play and video game both induced feelings of parasocial interaction, leading to increased feelings of enjoyment and engagement. However, explorative analyses showed that these feelings were higher for the Let's Play condition due to its stronger power to induce parasocial interaction. This is in line with research about the affordance of perceived parasocial interaction which concluded that the way in which viewers are addressed by a media character, their identification, and ability to emphasize increases parasocial interaction perceptions (Hartmann & Goldhoorn, 2011). Therefore, the increased similarity between viewers and Let's Player but also the direct interaction through the Let's Players comments led to higher parasocial interaction perceptions compared to the game in which the main character was represented as a cat that did not address the player directly. This is of special interest due to the significant mediating effect of enjoyment and engagement on continuation intention (H1) as the results show that watching a Let's Play led to lower enjoyment and engagement perceptions as playing a game. However, explorative analysis compared the effects of game experiences and parasocial interaction in a parallel mediation model and showed that both effects increased the continuation intention to play a game. Therefore, video games lead to higher enjoyment and engagement perceptions due to their interactivity and unique characteristics while Let's Plays led to higher enjoyment and engagement due to their affordance of perceived parasocial interaction. Consequently, both mediums have unique benefits which lead to the intention to continuously play a game. These positive findings are in line with the uses and gratification theory which states that consumers of a medium choose to engage with it to fulfil their needs (Blumler & Katz, 1974; Rubin, 2002). Playing video games seems to fulfil the need

for enjoyment and engagement due to their interactivity while watching a Let's Play fulfils the need through the perception of parasocial interaction.

#### 5.2 Influence of reviews

The second research question focused on the influence of review valence on the experiences during the media interaction, but also on preceding intentions to play and developed anticipations before interacting with a medium. To answer this question, participants either read a negative, neutral, or positive review which was hypothesized to influence these elements based on the direction of their valence. Moreover, trust was measured as a possible moderator on these outcomes.

Regarding the role of review valence on intention to play (H4a), anticipation (H4b), and enjoyment and engagement (H4c), negative reviews decreased both intentions to play and anticipations while positive reviews only increased participants' anticipations. However, these changes in anticipation successfully mediated intentions to play (H5a) and enjoyment and engagement (H5b) while interacting with a medium. No significant findings were found for review valence on enjoyment and engagement, meaning that reviews did not increase or decrease the perceived enjoyment and engagement during the media consumption. Moreover, neutral reviews were only significantly different from positive reviews on anticipation, however, neutral reviews were not expected to influence participants due to a lack of evaluative statements.

The stronger effect of negative reviews is in line with a frequently reported negativity bias of negative reviews on consumers decision making due to consumers tendency to avoid risks (Lee et al., 2009; Vaish et al., 2008). Initially, a negativity bias was not expected for hedonic products like video games as reviews about these products are associated with the subjective experience of the writer. In contrast, reviews about utility products are argued to be focused on objective functionality and quality attributes of a product and are therefore more likely to be prone to a negativity bias (Sen & Lerman, 2007). An explanation for the presence of a negativity bias for intentions to play but a lack for anticipations can be drawn based on the varying severity of associated risk and the decision-making process. Intentions to play are associated with a higher investment of time and require the active role of a consumer while anticipations do not equal such an active involvement. In addition, resulting behavioural intentions are based on previously held attitudes and beliefs. The development of these beliefs, in this case anticipations about a game, is less susceptible to be associated with a time or effort loss and are consequently less likely to be subject of a negativity bias. Therefore, a negative review was only significant for intentions so play due to higher risk perceptions. In contrast, anticipations were not only influenced by a negative review but also by a positive review, leading to a lack of a negativity bias due to lower risk perceptions. This finding was not in line with studies that investigated the amplifying effects of reviews on intentions to play and related sales ratings within the video game industry (e.g. Choi et al., 2018, Cox & Kaimann, 2015; Zhu & Zhang, 2006). However, these studies oftentimes did not specifically test the effects of reviews on anticipations or intentions for individual games but instead focused on large amounts of sales data and repeated review exposure. Therefore, the results

of the current study suggest that on first exposure a negativity bias seems to play a bigger role if risk perceptions are increased as well, not only for utility products but also for hedonic products like video games.

Furthermore, studies about consumer decision making have concluded that attitudes and beliefs can positively influence subsequent behavioural intentions for hedonic activities (Ajzen & Driver, 1991). This has also been underlined by the significant mediating role of anticipation on intention to play and enjoyment and engagement. Generally, reviews have been shown to be perceived as more helpful if they are congruent with previously held beliefs that are based on initial product ratings (Yin et al. 2016). Findings showed that these beliefs and anticipations did not only influence intentions but also the experiences during the media consumption which is in line with the expectation and confirmation theory by Oliver (1980). Therefore, the tendency to align expectations with subsequent experiences led to the finding that changes in anticipations after reading a positive or negative review influenced participants' intention to play the game and experiences of enjoyment and engagement during the media consumption. This finding was of special interest due to the full mediation result, meaning that anticipations fully explained how intention to play is influenced through anticipation after review exposure. The significant mediating effect of anticipation on engagement and enjoyment also explain the insignificant findings for review on these experiences. Consumers are argued to be more likely to be dependent on reviews when faced with an increased uncertainty due to a high number of available entertainment media (Choi et al., 2018). However, once participants engaged with the game or Let's Play themselves, missing cues were replaced with personal experiences that nullified the increased power of reviews when faced with uncertainty. Therefore, enjoyment and engagement experiences were not subject of reviews themselves but were indirectly influenced through established anticipations after review exposure. This effect of anticipation explained different relationships for which previous studies found insignificant findings, especially for the link between review on enjoyment and engagement through anticipations. Consequently, the current study offers an explanation for the decision-making process of consumers and added a new dimension of anticipation.

Based on existing literature about the importance of trust on reviews, trust was expected to moderate the effects on intentions to play (H6a), anticipation (H6b), and enjoyment and engagement perceptions (H6c). Surprisingly, trust was only significantly increasing the effects on intention to play. Similar to expectations before, uncertainty about an unknown video game was expected to increase the reliance on reviewers within the gaming community (Yang et al., 2012). While trust did increase intentions to play as expected, there were no significant findings for trust on anticipation or enjoyment and engagement. An explanation for the lack of complete fulfilment of expectation can be drawn based on the lack of trust manipulation in the study. According to Yang et al. (2012) active reviewers within gaming communities are perceived as more credible and professional by visitors of the websites that contain these reviews. However, the review stimuli did not contain cues that identified the review as professional. Moreover, increased credibility perceptions of recognized reviewers might be caused after repeated exposure. Consequently, the

review stimulus might have been identified as a consumer generated review as opposed to a more credible professional review. This might have led to contradicting effects due to the varying effects of consumer generated reviews compared to professional reviews within the gaming industry (Cox & Kaimann, 2015). Therefore, review readers were likely to assess the perceived trustworthiness of the review based on elements that were not controlled for in the study leading to inconsistent findings across variables.

All previously discussed results aid the answer to the final research question how reviews and varying experiences during the media consumption interrelate to influence the continuation intention of consumers. Explorative analyses further confirmed the effects of reviews on anticipations and intentions to play, which subsequently influenced experiences during the media interaction. However, these effects were also shown to directly influence continuation intentions. Consequently, it can be argued that effects of reviews are not replaced by enjoyment and engagement perceptions but instead, they are complementary. Moreover, the unique benefits of Let's Plays and games were identified as different affordances of enjoyment and engagement. Therefore, the study shows how game experiences are susceptible to different elements and underlines the increasing complexity and interrelation between own experiences, external information sources, and their joined influence on future decision making.

#### 5.3 Practical implications

The findings of the study help marketeers and game developers to increase consumers' intentions to continuously engage with a game and support it. In addition, being aware of positive effects of different information sources and media helps to increase general enjoyment and engagement perceptions of consumers.

External information sources as reviews can be used during the distribution and development phase to increase anticipations of consumers. This should be done through trustworthy mediators between developers, marketeers, and consumers. Such anticipations can lead to positive experiences during the media consumption which subsequently increase consumers' intention to continue to play the game. Moreover, benefits of different media should be maximized for positive outcomes. Publishers are already making use of early access of a game for Let's Player to raise awareness for a game, however, this is done to a limited extent. The findings underline the potential positive effects of parasocial interaction perceptions between viewers and Let's Players. Therefore, Let's Players should be chosen based on their similarity and interaction with the game's target group to further increase enjoyment, engagement, and continuation intentions. These strategies do not only offer implications for established publishers but can also be utilized by indie game developers to increase the distribution and adoption of their games. Likewise, developers should focus on making game characters within the game similar to their target group to further increase enjoyment and engagement experiences of players. Understanding the characteristics of their target group will assist developers in maximizing gaming experiences but also in strategically distributing games.

#### 5.4 Limitations and future research recommendations

While the findings could contribute to current theoretical developments, they also arose new open questions that could be subject of future research with consideration of limitations in the study. The effects of experiences during the media interaction resulted in positive outcomes on participants' continuation intention. However, especially in regard to parasocial interaction more controlled future research is needed that is exploring different affordances of these perception and their subsequent influence on enjoyment and engagement. This is of special interest due to the limitation of the Let's Player being female while the majority of respondents were male. The Let's Player was chosen based on the highest compliance with provided instructions, however an element influencing parasocial interaction perceptions is the perceived similarity between media character and viewer (Hartmann & Goldhoorn, 2011). Consequently, a mismatch between gender might have reduced parasocial interaction perceptions. Moreover, game characters are argued to afford parasocial interaction through an embodiment of a "self" within the game (Jin & Park, 2009). However, as controlled game characters are typically not designed to directly address players, future research might further investigate the viability of parasocial interaction within the domain of video games.

Moreover, the game used in the study was chosen based on different criteria which allow for appropriate comparison between the game and Let's Play. This also restricted the choice of the game, for instance through having to be linear and displaying core game elements early in the game to compensate for a short exposure time. Ideally, participants were expected to watch the complete Let's Play and play the game for at least 10 minutes. While the average viewing time consisted of 10.18 minutes and the play times of 8.72 minutes, responses were still included that viewed and played for a minimum of 2.5 minutes to avoid biased responses. Participants who did not enjoy the game or Let's Play were more likely to stop engaging with the activity after a shorter period of time. Therefore, a short exposure time was used to avoid responses that primarily consisted of participants who enjoyed the game and spent more time with it due to missing control over the exposure time which would have been possible in an in-person study. Future studies should take these limitations in consideration and aim for a controlled exposure time and investigate effects across game genres and player characteristics.

Findings of review valence and moderating effects of trust were less straightforward. Firstly, the current study found traces of a negativity bias for intentions that are associated with higher risks compared to actions that do not evoke the need of loss aversion, which might explain why a negativity bias can be found for some variables but not for others. However, as the current state of research is still in discussion about a negativity bias, future research is needed to test potential variations in risk associations within the domain of entertainment media and how they are subject to a negativity bias. Within this domain, special attention should be placed on enjoyment and engagement perceptions as they are not prone to be associated with increased risks. Secondly, the results suggested additional findings which could not be explained by the variables tested in the current study. While anticipations successfully mediated enjoyment and engagement perceptions, the results also suggest that an additional increase in review positivity leads to a decrease in enjoyment and engagement perception if anticipation is held constant. Possible important influences on information adoption which were not included in the current study are perceived helpfulness and usefulness of a review, especially for reviews that are overly positive or negative (Filieri et al., 2021; Matute et al., 2016). An additional increase in review positivity might therefore lead to decreased helpfulness and usability perceptions due to a lacking discussion of opposing elements. Consequently, readers might actively search for these opposing elements during the media interaction and report lower enjoyment and engagement perceptions. However, as these elements were not tested in the current study, future research should not only measure the effects of review valence on future intentions and game experiences but should also focus on possible antecedents of these outcomes. In addition, pre-test participants evaluating the reviews mainly consisted of female participants while the final study primarily consisted of male participants. Therefore, future studies should aim to reduce potential gender discrepancies.

Lastly, studies frequently report amplifying effects of trust on information adoption (e.g., Khwaja & Zaman, 2020; See-To, & Ho, 2014; Van der Heijden et al., 2003), however, findings in the current study only showed significant findings on intentions to play. Reasons for this could be the impact of previous experiences with the stimuli website and a lack of trust manipulation. The review stimuli used in the study was manipulated based on the review website IGN to underline the presence of a review. IGN was used due its widespread familiarity within the gaming community and was not manipulated to adhere to the scope of the study. However, IGN is a popular review website, therefore, previous experiences with the website and a lack of stimuli manipulation in the current study could have influenced trust outcomes in the study. If trust is controlled for, future studies could focus on the interplay between trust and anticipations and how they may or may not act together in decreasing or increasing consumers' intentions and media experiences.

#### 6. Conclusion

Consumers' reception of video games is difficult to predict and influence. Game designers oftentimes aim to offer a compelling game experience that positively influences the players emotional state and their motivation to continuously play the game. However, by now the video game community is no longer considered as a group of separate individual consumers susceptible to marketing claims of publishers. Instead, consumers seek out the experiences of others that determine their decision to engage with a game, but also their subsequent experiences and future intentions. The current study offered insights into the decision-making process after review exposures and demonstrated the importance of anticipations, not only on future decision-making processes but also on its influence of experiences during the media consumption. By doing so, current knowledge within eWOM was extended and applied to hedonic experiences of video games such as enjoyment and engagement while also considering the unique benefits of video games and Let's Plays. Playing a video game was considered as more enjoyable and engaging as watching a Let's Play, however, Let's Plays offered a distinctive benefit of evoking increased

feelings of parasocial interaction which positively influenced enjoyment, engagement, and continuation intentions. These findings offer a comprehensive view on how individuals evolve from potential consumers who read about a game, to individuals who build up anticipations, subsequently experience them, and lastly emerge as consumers who continuously want to encounter the positive experiences during the media consumption. In addition, the increasing complexity of the interrelation between previous information exposure and experiences during the media interaction are underlined. Future research should aim for controlled studies that are further investigating the effects of reviews on subsequent experiences and how preceding intentions and anticipations persist beyond the media consumption to influence the continuation intention of consumers.

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#### Appendix A

#### **Review valence stimuli**



#### **Cute Army: A Cat Story**

In the boring stealth adventure game "Cute Army: A Cat Story" you play as a young cat whose goal is to find and rescue the so-called "Cuties" without being seen or caught. If you fail to remain hidden and can't get away fast enough, your father will chase you until he captures and grounds you.



The player is introduced to this mediocre story and the game's goal through confusing cutscene pictures and a tutorial, which together attempt to explain the context of the game. As the player progresses, new contextual changes are described by even more low-effort cutscene pictures that are inappropriately appearing in-between levels. While doing so, unfitting music is playing in the background as the player is presented with repetitive subgoals that have to be fulfilled before continuing to the next level.

These different levels include stealth and survival elements that do not come together and are supposedly designed to become increasingly more difficult. At the same time, the player can somehow unlock achievements that seem to be based on simple game elements, for example upgrades, health, strategy, and varying enemy speed.

All in all, "Cute Army: A Cat Story" offers an unremarkable playing experience based on basic visuals and plain gameplay elements.

#### Figure A1. Negative review stimuli.



#### **Cute Army: A Cat Story**

In the stealth adventure game "Cute Army: A Cat Story" you play as a young cat whose goal is to find and rescue the so-called "Cuties" without being seen or caught. If you fail to remain hidden and can't get away fast enough, your father will chase you until he captures and grounds you.



The player is introduced to this story and the game's goal through cutscene pictures and a tutorial, which together explain the context of the game. As the player progresses, additional contextual changes are described by more cutscene pictures that are appearing in-between levels. While doing so, music is playing in the background as the player is presented with the subgoals that have to be fulfilled before continuing to the next level.

These different levels include stealth and survival elements and are designed to become increasingly more difficult. At the same time, the player can unlock achievements that are based on other game elements, for example upgrades, health, strategy, and varying enemy speed.

All in all, "Cute Army: A Cat Story" offers a playing experience based on different visuals and gameplay elements.

#### Figure A2. Neutral review stimuli.

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**B** 

By Joseph 🕢 Updated: 13 Mar 2021 6:37 am 📄 Posted: 13 Mar 2021 2:33 am

#### **Cute Army: A Cat Story**

In the entertaining stealth adventure game "Cute Army: A Cat Story" you play as a young cat whose goal is to find and rescue the so-called "Cuties" without being seen or caught. If you fail to remain hidden and can't get away fast enough, your father will chase you until he captures and grounds you.



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The player is introduced to this enjoyable story and the game's goal through clear cutscene pictures and a tutorial, which together manage to explain the context of the game. As the player progresses, new contextual changes are described by even more high-quality cutscene pictures that are appropriately appearing in-between levels. While doing so, fitting music is playing in the background as the player is presented with new subgoals that have to be fulfilled before continuing to the next level.

These different levels include stealth and survival elements that offer a tight playing experience and are properly designed to become increasingly more difficult. At the same time, the player is invited to unlock clear achievements that are based on interesting game elements, for example upgrades, health, strategy, and varying enemy speed.

All in all, "Cute Army: A Cat Story" offers a compelling playing experience based on qualitative visuals and exciting gameplay elements.

#### Figure A3. Positive review stimuli.

## Appendix B

## Rotated component matrices of the factor analysis

### Table B1.

Rotated component matrix for factors before the media consumption.

	С	omponent	;
Factor	1	2	3
Trust_1recoded			,830
Trust_2recoded			,776
Trust_3			,556
Trust_4recoded			,743
Trust_5recoded			,784
Anticipation_1recoded	,829		
Anticipation_2recoded	,837		
Anticipation_3recoded	,767	,423	
Anticipation_4recoded	,797		
Anticipation_5recoded	,830		
Anticipation_6recoded	,776		
Anticipation_7recoded	,660		
Intention_play_1recoded	,537	,724	
Intention_play_2recoded	,586	,682	
Intention_play_3		,790	
Intention_play_4recoded	,554	,668	
Intention_play_5recoded	,510	,745	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

## Table B2.

	Component				
Factor	1	2	3	4	
enjoyment1		,751			
enjoyment2		,744			
enjoyment3		,809			
enjoyment4		,814			
enjoyment5		,773			
enjoyment6	,417	,689			
engagement1				,743	
engagement2				,655	
engagement3	,509			,512	
engagement4		,647		,430	
engagement5				,517	
engagement6		,719		,405	
parasocial1			,713		
parasocial2			,751		
parasocial3			,626		
parasocial4		,462	,611		
parasocial5	,419		,607		
continue_DV_1recoded	,790				
continue_DV_2recoded	,806				
continue_DV_3recoded	,833				
continue_DV_4recoded	,800				
continue_DV_5recoded	,750				
continue_DV_6recoded	,682				
continue_DV_7recoded	,815				
continue_DV_8recoded	,750				
continue_DV_9recoded	,724				

Rotated component matrix for factors after the media consumption.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

#### Table B3.

Pearson correlations for scale measurements.

Correlations								
		Trust	Antici	Int_play	enjoy	engage	paras	conti_DV
Trust	Pearson	1						
	Correlation							
Antici	Pearson	,34**	1					
	Correlation							
Int_play	Pearson	,34**	,71**	1				
	Correlation							
enjoy	Pearson	,30**	,40**	,52**	1			
	Correlation							
engage	Pearson	,26**	,46**	,54**	,80**	1		
	Correlation							
paras	Pearson	,26**	,45**	,45**	,54**	,63**	1	
	Correlation							
conti_DV	Pearson	,32**	,58**	,67**	,62**	,71**	,67**	1
	Correlation							

\*\*. Correlation is significant at the 0.01 level (2-tailed).