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Flavour Choices in Digital Narrative Games: The Effect on Identification and Enjoyment

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Declaration of scientific integrity

The author hereby declares that they have read and fully adhered the [Code for Good Practice in Research of the University of Basel](#).

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Abstract

Choices are a central aspect of digital games and as such have gained importance in game research. However in recent research especially “meaningful” or moral decisions have been the main focus. With this work I aim to show how flavour choices, defined as choices bearing few to no consequences (Mawhorter, Mateas, Wardrip-Fruin, & Jhala, 2014) can be important in facilitating identification with the game character and enjoyment of the game. I further want to replicate the finding that identification leads to enjoyment and extend this finding onto narrative games. To test the hypotheses an online study with a between subject design was conducted. Findings show that flavour choices lead to higher levels of enjoyment but not to higher levels of identification. The finding of previous research stating that identification predicts enjoyment was replicated. I further discuss the possible mechanisms of how flavour choices facilitate enjoyment and give reasons why no effect of flavour choices on identification was found, drawing on the distinction between identification *with* and identification *as* among other things. The results show that choices in games do not need to be consequential in order to be enjoyed.

Introduction

Video games have come a long way since their beginnings in the 1950s (Wolf, 2008). Consoles and graphics have evolved greatly, new technology has changed the gaming experience - even allowing for social online gaming (Chikhani, 2015). In 2021 an estimated 2.9 billion people in this world will play video games, generating an estimated value of over \$170 billion in revenue (Newzoo, 2021).

People enjoy playing games, they let us escape reality, discover new worlds, let us be who we want to be, let us reach goals and some even bring us together with others (Przybylski, Weinstein, Murayama, Lynch, & Ryan, 2012; Rogers, Carpentier, & Barnard, 2016; Yee, 2006). Video games can also facilitate empathy and make us interested in subjects that we otherwise would not care about (Bachen, Hernández-Ramos, Raphael, & Waldron, 2016).

As Sid Meider, Designer of the game “civilization” once said: “A game is a series of interesting choices.” (Rollings & Morris, 2000, p.38). And indeed it is these choices that allow players to take an active role in the narrative, it is this interactivity (Green & Jenkins, 2014) that separates video games from other media (Grodal, 2000). Players in video games do not have to solely observe the characters in their narrative, they get to be part of it, making decisions for or as the character. Players get to decide if they want to fight or flight, to save their friend or themselves. The decisions they have to make often have moral implications, which a lot of researchers are interested in (Boyan, GrizzArd, & Bowman, 2015; Grizzard, Tamborini, Lewis, Wang, & Prabhu, 2014; Joeckel, Bowman, & Dogruel, 2012; Lange, 2014). Steinemann et al. (2017) even proposed that to create interactivity “decisions must feel meaningful and offer clear consequences with emotional ramifications for the player” (p. 63).

However, not all games offer meaningful choices and yet are still played and enjoyed. For example in the simulation game series “The Sims” (Maxis, 2000) the player decides things like what the Sims should eat for dinner or whether they should listen to R&B or classical music, decisions that one would not presumably call meaningful. Decision-making can also be used as a way to understand and build one’s

own identity. Quinn (2017) looked at the reasons people consume “Buzzfeed Quizzes”; personality quizzes that range from “Which Disney princess are you?” to “Order A Cake At The Bakery And We’ll Accurately Guess Your Favorite Color“ and are rather silly in nature. Quinn (2017) found that people not only took those kinds of quizzes as a form of entertainment, but also to strengthen their own perception of self. Thus, the participants were able to derive joy from making choices and seeing the corresponding results as well as validation of their personal identity. Another act of deciding which is not very consequential is that of customization. Customization can be defined as “user-initiated actions to actively change interfaces or features, using a set of available options” (Kang & Kim, 2020, p.107) and is a common feature in many games as well as a popular research topic (Dolgov, Graves, Nearents, Schwark, & Volkman, 2014; McArthur, 2019; Triberti, Durosini, Aschieri, Villani, & Riva, 2017; Turkay & Adinolf, 2010). The act of choosing is the central aspect of customization and as Kang and Kim (2020) suggested “the choices made in the process of customizing one’s avatar are closely related to the key aspects of self-conception, as these decisions help to embody the digital representation of the self” (p.2). But the act of choosing not only tells us something about our own identity, it might also help us identify with our game characters.

Related Work

Mawhorter et al. (2014) presented a theory of choice poetics, which is a framework for understanding the narrative effect of choices in digital games. It covers different modes of engagement, choice idioms and dimensions of player experience that can be affected by choice structures. A choice structure consists of the framing, options, and outcomes associated with a choice.

One of the dimensions defined by Mawhorter et al. (2014) that can be affected by choice is identification. Identification with a character can be defined as “a process that consists of increasing loss of self-awareness and its temporary replacement with heightened emotional and cognitive connections with a character” (Cohen, 2001, p.251).

When identifying with a character, one temporarily adopts the perspective and identity thereof (Cohen, 2001). Mawhorter et al. (2014) proposed that choices can “encourage the player to make judgements from the perspective of a character, effectively asking the player to take on the character’s point of view” (p. 6).

The authors further described choice idioms, which are generic patterns for one or all of these aspects of choice structures. Examples would be an *unchoice*, where there is only one available option, or a *false choice*, where all options lead to the same outcome. Another choice idiom is the *flavor choice*, which is defined as: “a choice with relatively minor (but potentially long-lasting) consequences” (Mawhorter et al., 2014, p.5). This could be a choice about picking a weapon, or even the name one gives to a character. The physical customization of a character would also belong in this category, as it rarely has an affect on the game narrative. A flavour choice could also be about the background of the character or their personality, as long as there are no bigger consequences on a story level to this choice. In comparison to other choice idioms, Mawhorter et al. (2014) proposed that flavor choices could influence a player’s perception of their game character’s identity to a higher degree, as they are often made for personal reasons and not for the reaching of a certain goal.

In line with the Theory of Choice Poetics stand the findings of a qualitative work by Kway and Mitchell (2018). The authors invited 15 players to play one of three digital games and recorded each of these sessions, the recordings were then shown to the players and paused whenever the players had to make a decision in the game. Participants were then asked to explain how they came to make that decision. Afterwards the players were also interviewed for deeper understanding. One of the main findings was that choice-making was strongly tied to the players’ identification with their game character. The authors found that players took many steps to identify the playable character’s personality traits through the narrative and dialogue that they were given. They also suggested that choice-making depended on the presence or absence of a game objective, meaning if a certain goal needed to be achieved. If there was a game objective the player could attribute their decisions on the characters’ need

to fulfill the game objective and in contrast when there was no game objective the player could make choices to better understand their characters. Thus, players will choose to act in a way that reaches the character's goal if that choice feels important to the objective of the game and the consequences are high. But if there is no perceived game objective, and therefore no consequences or only minor ones, the player can make a choice to explore their character.

Identification in Digital Games

While Cohen (2001)'s definition of identification is primarily based on the connection with a media character (e.g. from a tv series), the identification experienced through gaming is not exactly the same, as it is not solely observing the character that fosters the identification but the interactivity with/through it (Klimmt, Hefner, & Vorderer, 2009). Klimmt et al. (2009) therefore argued that it is not a dyadic but a non-dyadic or monadic relationship, meaning that in the case of identification through gaming there are not two separate entities anymore, but only one. For Klimmt et al. (2009) identification is the merging of self and game character.

A newer model of identification by Downs, Bowman, and Banks (2017) tries to synthesize both of these approaches, postulating that the relationship between player and game character can be both - dyadic and monadic - at times. This also means that players can identify *as* a character while also identifying *with* a character. Downs et al. (2017) further suggested a "multidimensional, polythetic measurement architecture for player-avatar identification" (p.3), meaning that there are several underlying dimensions of identification and a person can have several of these dimensions, no single dimension would be sufficient or necessary for identification to occur however (Downs et al., 2017). According to this model people would need different aspects in a game or game character in order to identify with them. The dimensions that Downs et al. (2017) proposed were: Physical similarity, homophily, wishful identification, perspective-taking, liking and embodiment.

Physical similarity between player and game character is one dimension that can

lead to identification. Messinger, Ge, Smirnov, Stroulia, and Lyons (2019) found that when players can customize the physical appearance of a game character, they will most likely make a character similar to themselves, with the exception of physical attributes that are perceived to be weak in real life, those will be enhanced. However not all characteristics are the same, core identity elements like gender and race will often be kept (Trepte, Reinecke, & Behr, 2009), while peripheral elements like hair or clothing will be changed (Messinger et al., 2019). Another work by Williams (2010) found that players who could alter the appearance of the character to be similar to themselves, reported higher levels of identification. But players can not only be similar to their game characters in physical appearance, they can also have the same or similar attitudes, values, education and social status, which is then called *homophily* (Eyal & Rubin, 2003). As Downs et al. (2017) mentioned, players in narrative-based games might be confronted with rich character descriptions that need to be considered during gameplay, while also having to take their own values into account. Such moments allow the game players to judge how similar the self and game character are in their values and attitudes. Indeed some of Kway and Mitchell (2018)'s participants said that they "alternated between the characterization that was 'given' to them and their own need for self-expression" (p. 233). The main way they could express themselves and affect the personality of the game character was through the ability to make choices. So when one shares values and attitudes with the game character, the merging of self and character might become easier as the gap between the two is not as wide. *Wishful identification* does not describe the actual similarities between player and character but the ones they wish they had. Wishful identification can be defined as the desire to be like or act like the character and can influence people and their behaviours long after the exposure is over (S. Murray, 2007). It has also been found that wishful identification is related to the perceived similarity with a character, such that wishful identification is higher for same-gender characters (Hoffner & Buchanan, 2005; Lonial & Van Auken, 1986) or characters with same attitudes (Hoffner & Buchanan, 2005). *Perspective-taking* is another mechanism through which one can identify with a

character. For many scholars perspective-taking is central in the process of identification, e.g. Cohen (2001)'s definition of identification as "adopting the identity and perspective of a character" (p. 251) focuses heavily on the shared perspective. Perspective-taking happens when a person internalizes what happens to the game character and processes it as if it happened to them (Downs et al., 2017). Story-based games that have a clear goal for the game character or give background information on the character, make it easy for players to take the perspective of the game character (Downs et al., 2017; Kway & Mitchell, 2018; Schneider, Lang, Shin, & Bradley, 2004). *Liking* is another dimension proposed by Downs et al. (2017). While Cohen (2001) clearly separates liking from identification, Downs et al. (2017) proposes that liking the character can lead to more identification (Downs et al., 2017). However this connection would be of rather indirect nature, meaning that liking and feeling positive towards the character leads to more empathy towards and thus more identification with it (Downs et al., 2017; Raney, 2004). The last dimension presented by Downs et al. (2017) through which one can identify with the game character is *embodiment* which describes the fact that players experience the game through a "body container" (Van Looy, Courtois, De Vocht, & De Marez, 2012), a concept where the player's physical body is mapped onto the game character's digital body (Biocca, 1997).

Identification and Enjoyment

But why should we even want to identify with a character? Research has shown that identification can contribute to game-specific empathy and interest in learning (Bachen et al., 2016), as well as strengthen one's sense of responsibility (Walter & Tsfaty, 2016). It is also closely related to other dimensions of player experience, such as flow (Soutter & Hitchens, 2016), transportability, presence (Christy & Fox, 2016; Teng, 2017), and enjoyment (Birk, Atkins, Bowey, & Mandryk, 2016; Hefner, Klimmt, & Vorderer, 2007; Trepte & Reinecke, 2010).

In Vorderer, Klimmt, and Ritterfeld (2004)'s model of complex entertainment experiences, enjoyment is the core of media entertainment and is far more than just an

affective reaction. Vorderer et al. (2004) proposed that enjoyment is a complex construct that consists of physiological, affective and cognitive dimensions. Building on this model, Hefner et al. (2007) described a mechanism where identification can lead to enjoyment, explaining it through a possible reduction of self-discrepancy. The authors were able to support their claims that identification leads to enjoyment with a pilot experimental study with players of “Battlefield 2” (a first person shooter game). Trepte and Reinecke (2010) also found a relationship between identification and enjoyment. The participants of Trepte and Reinecke (2010)’s study did not actually play a game however, as they were simply asked to imagine an avatar for a game. Birk et al. (2016) who also found that identification leads to higher levels of enjoyment let their participants play a runner game called “timed infinite runner”. While a connection between identification and enjoyment seems rather clear now, this effect might be game genre specific. None of the previously mentioned studies used games with narratives, despite identification potentially being especially important in narrative- or story-based games.

In their work Ferchaud and Sanders (2018) let their participants play “Fall Out: New Vegas (NV)”, which is a story-based game, where players get to actively make choices as the game character. Among other things the authors looked at how identification and enjoyment were related. For their identification measure, they used the identification subdimensions from Downs (2010), a previous version of the 2017 model (Downs et al., 2017), which included the following dimensions: Perspective-taking, physical similarity, customization, homophily, wishful identification and liking. One of Ferchaud and Sanders (2018)’s findings was that perspective-taking, homophily and liking predicted enjoyment. An interesting finding that was not further elaborated on by the authors.

Choices and Enjoyment

The previously mentioned model by Vorderer et al. (2004) further suggests that enjoyment through media entertainment can manifest itself as the following: 1.)

serenity, exhilaration, and laughter 2.) suspense, thrill, and relief 3.) sadness and melancholy 4.) sensory delight and 5.) achievement, control, and self-efficacy. Looking at the last point we can see some thematic parallels to the needs proposed in the Self Determination Theory (R. Ryan & Deci, 2000, SDT), which proposes that in order to feel intrinsically motivated, three needs have to be satisfied, namely competence, autonomy and relatedness. Based on the SDT, Tamborini, Bowman, Eden, Grizzard, and Organ (2010) presented a model of enjoyment that defines enjoyment in entertainment research as need satisfaction, proposing that the degree to which the three SDT needs (competence, autonomy and relatedness) are satisfied, the more enjoyable a game will be. In both theoretical approaches, the aspect of control can be found. In Vorderer et al. (2004)'s models of complex entertainment control can be seen as a manifestation of enjoyment and in Tamborini et al. (2010)'s SDT approach it can be found in the need of autonomy, which says that people need to feel in control of their own behaviours (R. Ryan & Deci, 2000; R. Ryan, Rigby, & Przybylski, 2006). In games, players can have control over several things, e.g. they can customize the physical appearance of their characters or decide what their character does. As Kim et al. (2015) found, customization can lead to higher autonomy and control, which in turn leads to higher enjoyment. The participants in Bowman et al. (2016) that showed increased recollection of control over their game character also reported higher levels of enjoyment. As for Rogers et al. (2016), they found that control over a character led to higher perceptions of control which in turn increased enjoyment. Now while flavour choices are not very consequential to the game, they still give players a sense of control over their game character, which should lead to more enjoyment.

People tend to enjoy choices they make for others more than choices they make for themselves (Polman & Vohs, 2016). And as Polman and Vohs (2016) argue, one of the reasons why this might be, is the aspect of who bears the consequences. When making decisions for oneself, one also has to bear the consequences thereof. When making a choice for another person however, it is that other person that has to live with the consequences. As Polman and Vohs (2016) put it: "Decisions whose outcomes

would exert less of an impact on the self could be experienced as rather freeing and fun, especially in contrast to decisions that would more notably affect the self.” (p. 472). In the context of the game one could argue that one chooses for someone else - for the game character. And as the flavour choices bear few or no consequences at all, players should enjoy making those choices even more.

Aim of the Study

In summary, the aim of the study was twofold. First, I wanted to show how flavour choices, as defined as choices without greater consequences can lead to a.) identification with the game character and to b.) heightened enjoyment of the played game. Second, I tried to replicate the findings of previous research that identification leads to enjoyment, and expand the findings by testing this on a narrative game.

Based on the literature referred to in the related work section I propose the following hypotheses and research question:

H1: Flavour choices lead to more identification compared to no choices.

H2a: Identification positively predicts enjoyment.

H2b: Dimensions of identification predict enjoyment.

H3: Flavour choices lead to more enjoyment compared to no choices.

RQ: How will the dimensions of identification be affected by type of given choice (flavour choices or no choices) ?

Method

Participants

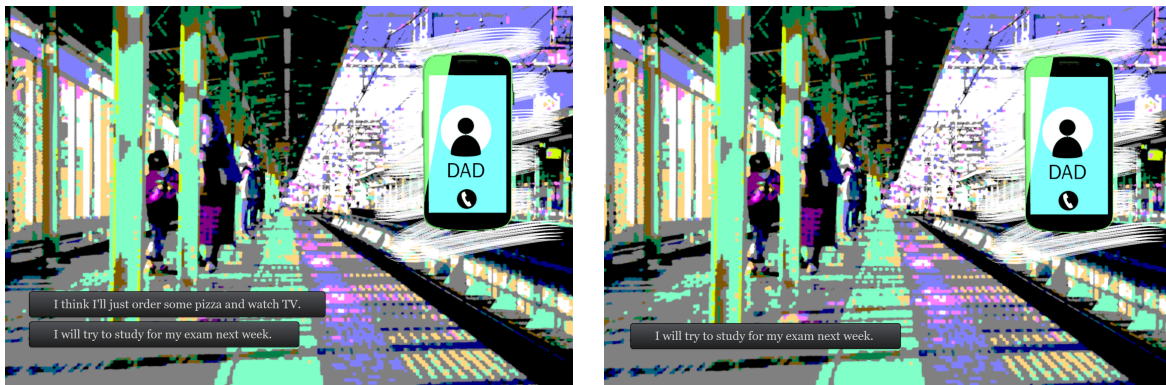
Participants were recruited over social media (Reddit, Facebook, Instagram) and over local recruitment sites for students. A total of 469 people clicked on the survey link, of which 372 finished the survey. A further 238 participants were excluded for failing the attention and quality checks or withdrawing their consent, leading to a final $N = 134$ participants. Of those 79 identified as female, 46 as male, 7 as non-binary, and 2 as other. Participants were between 18 and 49 years old ($M = 26$, $SD = 5.70$).

Participants were not compensated but had the option to enter a raffle to win one of ten 20\$ Amazon Gift Cards.

Design and Materials

The experiment followed a between-subject design with “Flavour Choice” as the independent variable. Participants were randomly assigned to either the experimental or control group. The experimental group played a narrative game with 12 situations where they would have to make a choice between two options for their game character. The control group played a similar version of the same game, they only had one option in those moments however, and therefore no choice.

The participants were tasked with playing a narrative-based adventure game following a story I created. I further decided to make it a visual novel, which focuses heavily on narrative in a novel-like format, a concept that originated in Japan (Saito, 2021). In the game, the player took the role of a person that enters a train to go home in the evening, falls asleep and finds themselves waking up at a station they have never heard of before. The player had to follow this person for the night and experience their little adventure. The game was rather short and only took about 5-10 minutes to play through. There was no clear game objective or goal for the character, so that it was more about exploring the narrative, meaning that there was no clear "right option" for the choice group to pick (Domsch, 2013). The game was built in a way that both options would lead to the same outcome, meaning there was no branching in the game. This was done so that both groups would experience the same story and because as Mawhorter et al. (2014) states such “false choices can be used to create the illusion of a richly branching story without spending the resources necessary to do so” (p. 5). The no-choice group was given one of the two options that the choice group had. The players had to make decisions on twelve different occasions in the game, or click on the one option presented in case of the control group (Figure 1). Between those situations the game character was also given dialogue that did not require input from the player (Figure 2).

(a) *Version with two options*(b) *Version with one option***Figure 1**

Screenshots of a choice situation for both versions of the game

The game was played in the 1st person point-of-view, which means one saw the story through the character’s eyes, and did not see the body of the character being played. This was done as the physical appearance of a character could influence the identification process, as some participants might look more similar to the character than others. I also kept the game character gender-neutral, to avoid any gender-matching effects (Ferchaud & Sanders, 2018). The answer options were given in first person direct speech (e.g. “ I think I’ll just order some pizza and watch TV.”). The visual novel was built using TyranoBuilder, a program that can be handled without prior knowledge about game coding.

Measurement***Identification***

To measure identification I used the model by Downs et al. (2017). It is composed of six identification subscales and an identification composite score which is the mean of the scores of the subdimensions. The six subscales are: Embodiment (6 items, e.g. “I feel like I am inside this avatar when playing”), value homophily (9 items, e.g. “This avatar has the same attitudes as me.”), physical similarity (5 items, e.g. “I physically resemble this avatar.”), wishful identification (3 items, e.g. “Sometimes I wish I could be more like this avatar.”), perspective-taking (6 items, e.g. “I tend to

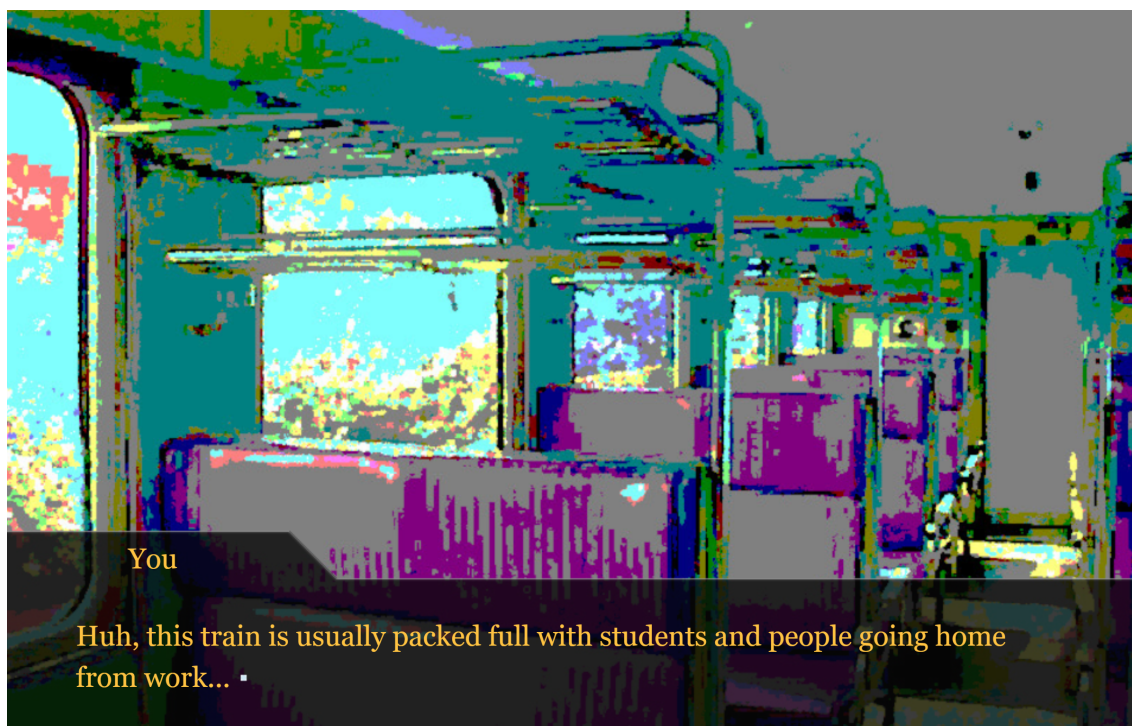


Figure 2

Screenshot of dialog between the choice situations

understand the reasons why this av. does what he or she does.”) and liking (4 items, e.g. “I like this avatar.”). By mistake the four items of the liking dimension were not included in the online survey. However, due to the polythetic architecture of the model, I decided to go on with the analyses without the liking dimension. Additionally, in the structure analyses done by Downs et al. (2017), liking was one of the dimensions that explained less variance and therefore can be seen as a weaker dimension within the model.

All scales were answered on a Likert-Scale with “1” as strongly disagree and “7” as strongly agree. I changed the terminology slightly, exchanging “avatar” with “game character”. A common definition of "avatar" in the context of digital games is a personalized graphical illustration which can represent a computer user or a character (Janssen, 2018) and I worried that this term would confuse participants as the game is played in the first person point of view and hence no visual representation of the character is given.

Enjoyment

For the measuring of enjoyment I used the interest/enjoyment subscale of the Intrinsic Motivation Inventory (R. M. Ryan, 1982, IMI). This subscale consists of 7 items, e.g. "I enjoyed doing this activity very much ". Answers are given on a 7-point Likert scale, with "1" as "not at all true" and "7" as "very true". I changed the terminology slightly, exchanging "this activity" with "playing this game" or "this game". The IMI is based on the SDT, was previously validated (McAuley, Duncan, & Tammen, 1989) and also used by other scholars such as e.g. Birk et al. (2016).

Procedure

After reading the introduction and giving informed consent, participants were randomized into two groups. One group went on to play the flavour-choice version of the game, while the other group went on to play the no-choice version. Afterwards participants were asked a multiple choice question about the content of the game, this was done as a quality check to filter out participants that did not do so or not attentively. Participants then went on to fill out the identification questionnaire and the IMI. After that participant's demographics, namely their gender and age were compiled. Participants were then asked if they consented to their data being used in this study after all. At the very end of the survey, participants had the option to leave a comment and enter the raffle to win a voucher.

Results

In the following section I present the results of the study in order of presented hypotheses. All analyses were done using R (R Core Team, 2018).

H1: Flavour choices lead to more identification compared to no choices.

To test whether participants playing the game with flavour choices would have a higher identification score than the group with no choices, a one-tailed independent two sample t-test was conducted with choice-version as independent variable and the

composite identification score as dependent variable. The results were non-significant $t(132) = -0.089$, $p = .465$, there was no difference between the choice group ($M=3.84$ $SD=0.93$) and the no choice group ($M=3.82$, $SD=0.89$).

H2a: Identification positively predicts enjoyment.

To test whether identification predicts enjoyment, a simple linear regression analysis was calculated. The fitted regression model was $0.987 + 0.826^*$. The overall regression was statistically significant ($R^2 = .35$, $F(1, 132) = 71.06$, $p < .000$) (Figure 3). According to Cohen (1988) a R^2 value greater than 0.25 can be seen as a substantial effect size. It was found that the identification composite score significantly predicted enjoyment ($\beta = 0.826$, $p < .001$).

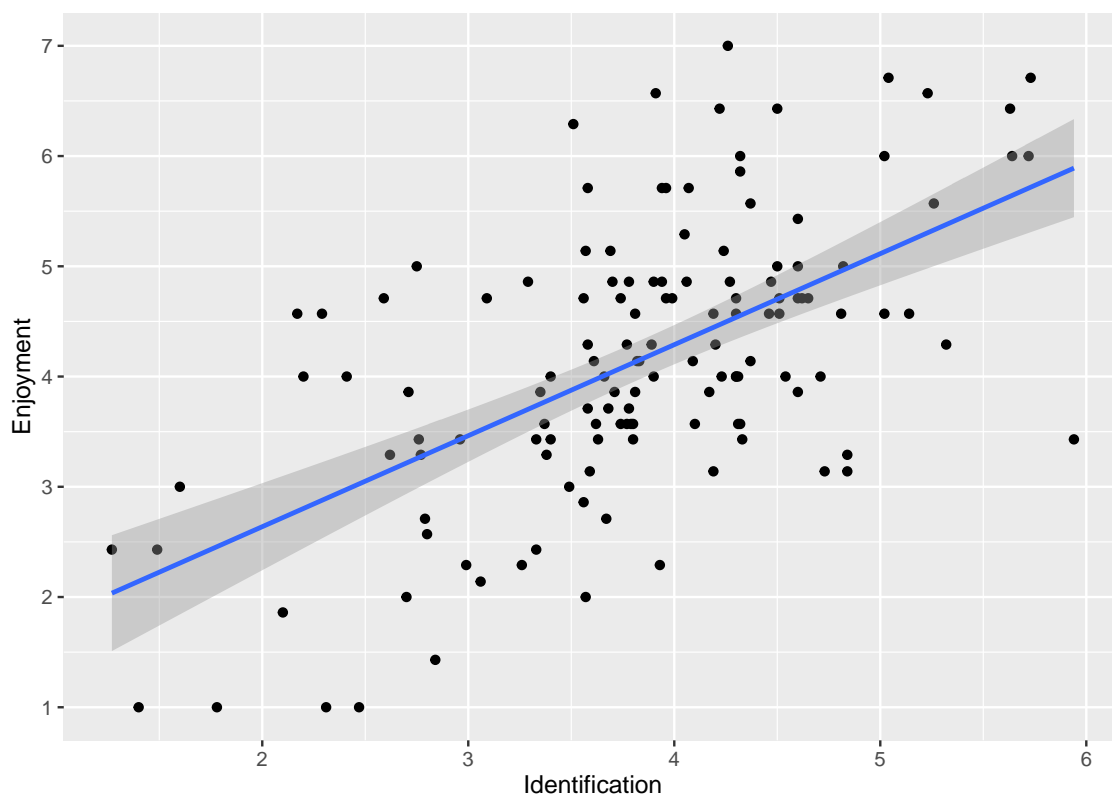


Figure 3

Relationship between enjoyment and identification (as measured through the identification composite score).

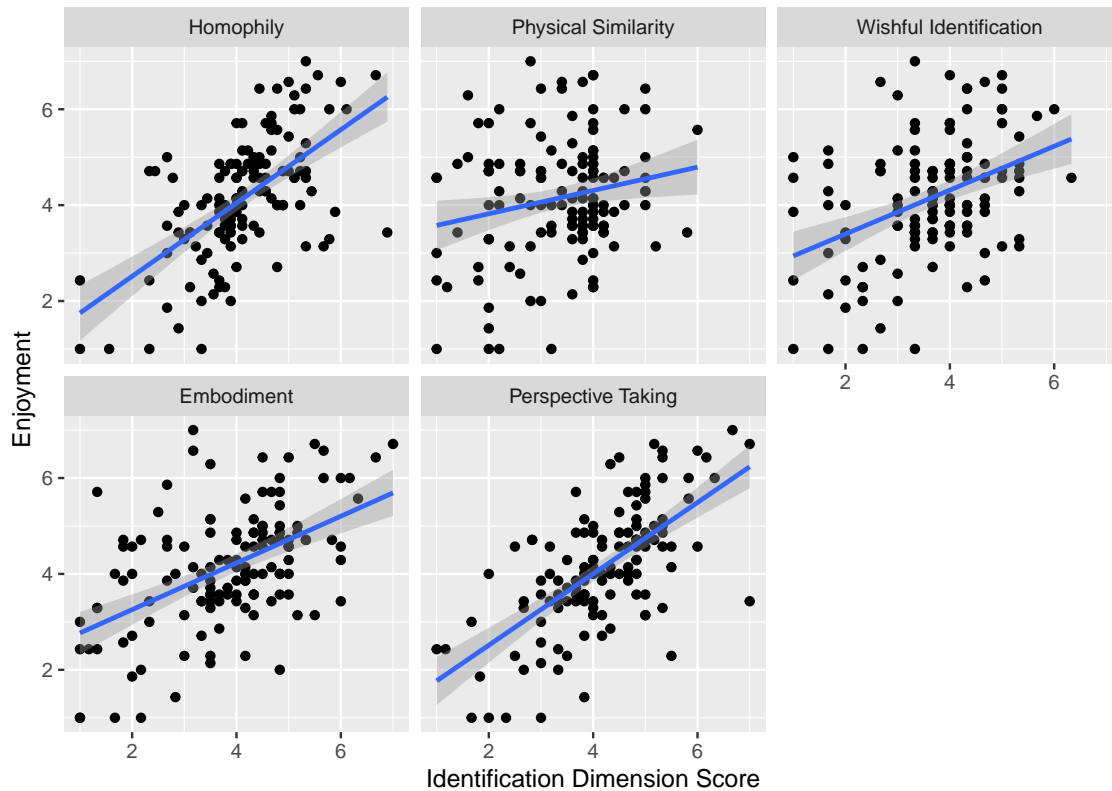


Figure 4

Relationship between enjoyment and identification dimension score for each dimension.

H2b: Dimensions of identification predict enjoyment.

To look at the relationship between the identification sub-dimensions and enjoyment, a multiple linear regression was used. The overall regression was statistically significant ($R^2 = 0.46$, $F(5, 128) = 23.46$, $p < .000$). It was further found that perspective-taking ($\beta = 0.519$, $p < .000$) and homophily ($\beta = 0.138$, $p = 0.036$) significantly predicted enjoyment. Physical similarity ($\beta = -0.16$, $p = 0.077$), embodiment ($\beta = 0.05$, $p = 0.60$) and wishful identification ($\beta = 0.032$, $p = 0.743$) did not significantly predict enjoyment. Figure 4 shows the relations between enjoyment and identification for each identification dimension.

H3: Flavour Choices lead to more enjoyment compared to no choices.

To test H3, I conducted a one-tailed independent two sample t-test with choice-version as independent variable and enjoyment as dependent variable. The group

with choices ($M=4.4$ $SD=1.34$) showed significantly higher enjoyment scores $t(132) = -2.11$, $p = .018$ compared to the no-choice group ($M= 3.9$ $SD=1.15$). Cohen's d was calculated as an indicator of effect size and showed a small to medium effect ($d = 0.365$) (Cohen, 1988).

RQ: How will the dimensions of identification be affected by type of given choice (flavour choices or no choices) ?

Next I wanted to see if there were any differences in the identification dimensions between the two groups (RQ1) so I looked at the means between the groups for each identification dimension (Table 1). The homophily scores were practically the same in both groups. The choice group had slightly higher scores in embodiment and perspective-taking while the no choice group showed slightly higher scores in physical similarity and wishful identification. For a more in-depth inspection, I plotted the data for each individual per group. This did not lead to any clear pattern however.

Table 1

Mean (M) and Standard Deviation (SD) for identification dimensions (homophily, physical similarity, wishful identification, embodiment and perspective-taking) per group.

Group	Homophily		Phys. Sim.		Wishful ID		Embod.		Perspective	
	M	SD	M	SD	M	SD	M	SD	M	SD
Choice	4.13	1.09	3.25	1.10	3.58	1.11	3.95	1.33	4.27	1.14
No-Choice	4.14	0.91	3.44	1.03	3.69	1.14	3.72	1.34	4.12	1.09

Discussion

The goal of this study was first to find out whether flavour choices would lead to identification with a game character and to enjoyment of the game, and second to replicate the finding that identification leads to enjoyment and extend it further by applying it to a narrative game. There was no significant difference in the level of identification between the two groups therefore I was not able to support H1 which said

that flavour choices would lead to higher identification. I was able to support H2a replicating previous findings that identification leads to enjoyment. Further I also replicated the finding of Ferchaud and Sanders (2018) that the identification dimensions predict enjoyment (H2b) and especially that perspective-taking and homophily predict enjoyment, but none of the other dimensions alone. The findings of the study also support the hypothesis that flavour choices lead to enjoyment (H3). As for the research question on whether there are any differences in the dimensions of identification between the two groups I found that: 1) Homophily was the same for both groups 2) the flavour choice group had slightly higher levels of embodiment and perspective-taking and 3) the no choice group had slightly higher levels of physical similarity and wishful identification. The findings will be further discussed.

Identification in the Narrative Game

I was not able to support the hypothesis that flavour choices would lead to more identification compared to having no choices at all. One reason why I could not find this could be that the game was too short, that the participants did not have enough time to bond with the character and identify with it, because as other researchers have found out, the process of identification takes time (Kway & Mitchell, 2018). Further this might have been due to the different experience of identification as proposed by Downs et al. (2017), meaning that identification works differently for everyone, for some the flavour choices might have been enough to elicit an experience of identification with their character while for others it was not.

Identification Dimensions and Types of Identification

Taking a closer look at the identification subdimension, we can see that for embodiment and perspective-taking the flavour choice group showed slightly higher scores, while for physical similarity and wishful identification the scores of the no choice group were slightly higher. As Downs et al. (2017) proposed: “One could simultaneously identify *as* an avatar while also identifying *with* an avatar” (p.3), basing the identifying *with* part on the literature of identification with traditional media

characters such as in TV shows or movies (Cohen, 2001) and the identifying *as* part on the merging of game character and player as seen in Klimmt et al. (2009). This distinction of identification *with* and identification *as* can also be found in Shaw (2011).

Concerning their dimensions, Downs et al. (2017) proposed that value homophily, wishful identification, perspective-taking and embodiment are mechanisms that show a sense of being *like* and being *as* the character. They further suggest that liking and physical similarity are mechanisms that describe a sense of the player being *with* their character. This could mean that there not only exists one type of identification but two or more and that these might also be related to the type of media entertainment that is consumed. With a slight adjustment from Downs et al. (2017) I suggest the following relations:

1) Identification with being *as* is presented through the mechanism of perspective-taking and embodiment. In my study, the group that had the flavour choices showed slightly higher levels of perspective-taking and embodiment. I would argue that they experienced their version of the game as exactly that: a game. Through the aspect of interactivity, they were able to take on the perspective of the game character, understand why they would say a certain thing at any given moment, or alternatively, why they would not say it. The aspect of embodiment as described by Downs et al. (2017) is closely related to the merging of player and game character (e.g. the item “In the game it is as if I’ve become one with the avatar.”) and therefore also belongs to this type of identification *as* the game character. This monadic type of relationship, this merging of player and character, is a form of identification unique to the medium of video games. (Klimmt et al., 2009).

2) Identification as being *with*: Downs et al. (2017) suggested that physical similarity and liking are mechanisms through which one feels as being *with* the character. However, I would argue that wishful identification also belongs to this category. In order to wish to be like someone else, one needs to understand that this is a separate person or entity which, to a certain degree, is different from oneself. This is the case for identification with traditional media (TV series, movies, books) on which

the dyadic identification process theories are built upon. I therefore argue that wishful identification is a mechanism through which one can identify *with* a character. In my study, participants in the control group showed slightly higher levels of physical similarity and wishful identification. It is my guess that these participants (although still having had to interact with the game by clicking on the given options for their character) experienced their “game” more like a movie than a real game, which led them to identify more *with* their character than *as* their character. What is especially interesting is that the control group did show slightly higher levels of physical similarity compared to the experimental group, although none of the groups did see their character and therefore had no information on the character’s appearance. One participant said “I had no idea what the character looked like [...] I kind of imagined myself as the character so I guess I looked like the character? but it was more like the character looked like me.” While this does not explain the difference in physical similarity scores between the groups, it gives us the insight that a feeling of physical similarity might not necessarily need to stem from an actual visual representation.

3) Identification as being *like* is a sense that players get through the mechanism of value homophily. Regardless of the game’s interactivity, both groups’ score for homophily was the same. However, both groups were given the same information on the character’s values and attitudes through the in-game text. It is possible that participants from both groups used these in-game texts to actively look for cues on who their game character was (like the participants of Kway and Mitchell (2018) did) and then compared this to themselves (Downs et al., 2017). This sense of being *like* could therefore be experienced in either a game or other passive media entertainment like a movie and is solely dependent on the provided information about the values and attitudes of the character. But what happens when the player is not able to find any cues on the character’s values or background? This was the case for at least one of my participants, who commented the following: “Regarding the main character, since I don’t know much about him, his backstory, personality or anything, I played him a self-insert where I just picked options that were close enough to what I might say/do in

that situation which were pretty close for the most part". Not giving a lot of information about the character can therefore encourage players to "fill" their character (Shaw, 2011). And while this might sound like the easy option for game designers Shaw (2011) warns that if a character is too empty the player might become too self-aware during the game and will lose the chance to identify with the character. Drawing on the discussion of how a game character should be, Lee and Mitchell (2018) propose a kind of "shell" character, which is neither a blank slate, nor a detailed well-rounded character but a balance between the two.

The presented threefold division of the identification dimensions in connection to the according media type(s) might help us understand the process of identification and help game designers understand when and how to facilitate which identification types. For the current study, this division of identification types might further explain why no significant difference of identification was found between the two groups. Identification was measured through the identification composite score which is the mean over the identification dimensions. This mean of the dimensions does not allow to make distinctions between different types of identification. This means that two of the different types of identification (identifying *with* and identifying *as*) might have "cancelled" each other out as the composite score could not grasp this difference in identification. This might even lead us to the question whether this synthesizing of two identification types as proposed by Downs et al. (2017) makes sense for further research.

Identification and Enjoyment

While we do not exactly know *why* some people identified more with the game character than others, what we do know is that those participants who did identify more also enjoyed the game to a greater degree. This means that the relation between identification and enjoyment found in previous research (Birk et al., 2016; Hefner et al., 2007; Trepte & Reinecke, 2010) was replicated in my study and extended further to narrative digital games. When looking at Downs et al. (2017)'s dimensions of identification I found that they also positively predict enjoyment. What is especially interesting is that homophily and perspective-taking did predict enjoyment, but not

physical similarity, wishful identification or embodiment. This can be seen as a replication of Ferchaud and Sanders (2018)'s finding that homophily, liking and perspective-taking predicted enjoyment. To this point I do not have an explanation why exactly these dimensions seem to be important to experience enjoyment. However, it might be the case that this finding is genre specific, as Ferchaud and Sanders (2018) also used a narrative game in which the players had to make explicit choices for their game character. For other games or game genres other dimensions might be important to experience enjoyment. More research is needed on whether this pattern is game genre specific. What I can say so far is that game designers that want to facilitate enjoyment in narrative games should place special care on fostering value homophily and perspective-taking.

Control or Choice?

In my current study it was found that participants that were given flavour choices during the game, enjoyed the game to a greater degree than those who did not have those choices. These flavour choices did not have any consequences as they led to no branching within the game and were not framed to be very consequential. While not allowing for real control, they may still have elicited a perception of control and agency, which Rogers et al. (2016) found are able to increase enjoyment. Agency, of which a widely used definition is "the satisfying power to take meaningful action and see the results of our decisions and choices" (J. Murray, 1997) is said to be one of the central pleasures experienced in interacting with digital environments (J. Murray, 1997; Tanenbaum & Tanenbaum, 2010). In the context of narrative and story-based games, agency should not be understood as the absolute freedom to act without any restrictions but more as a commitment to meaning (Tanenbaum & Tanenbaum, 2010), which means that "Agency is not about selecting between options in this case, but is instead about expressing intent, and receiving a satisfying response to that intent." (Tanenbaum & Tanenbaum, 2009, p.8). This more recent definition of agency changes the focus from impacting the game to the intentions behind a choice, which in turn

leaves room for the notion of perceived agency. Interestingly, a perception of agency can be facilitated even though the game is linear and non-branching and therefore does not allow the player to actually impact the story (Fendt, Harrison, Ware, Cardona-Rivera, & Roberts, 2012). Game designers can make use of this “Illusionary Agency” to “trick” the player into thinking that they have personal control over the game when in fact it guides them through a relatively linear story (MacCallum-Stewart & Parsler, 2007). In case of my study, this could mean that the presentation of the two options in the choice group - although leading to the same outcome - was enough to facilitate a feeling of agency, which in turn might have led to an increase in enjoyment.

Another reason why those flavour choices would enhance the enjoyment of the game can be found through the work of Polman and Vohs (2016). Polman and Vohs (2016) found that if one is making decisions for someone else, there are fewer consequences to be expected which can lead to the person experiencing the act of choosing as freeing and fun. While digital games already offer a safe space to experiment in without consequences for the real life (Jansz, 2005), flavour choices further allow players to explore a game without having to fear any consequences within the game. While we know that (flavour) choices lead to enjoyment, further research on the underlying mechanism is needed, which might also give more insight into how much of it is due to having actual or perceived control and how much of it is due to the act of choosing.

Limitations and Future Research

Of course, my study has its limitations. One such limitation would be that the game was potentially too short to allow for a connection being formed with the game character, therefore hindering identification therewith. As Kway and Mitchell (2018) found, time and commitment is needed before players develop a connection with the game character. While we do not know exactly how much time is needed, Kway and Mitchell (2018)’s participants played for 25 minutes on average, which is significantly longer than the 5-10 minutes that my participants needed to play the game.

Another limitation are the missing items for the liking dimension of Downs et al. (2017) model. While it is one of the dimensions that is not as strongly related to identification and the model is polythetic, the absence of the liking dimension might still have distorted the identification composite score and therefore my analysis.

Flavour Choices are defined as choices with few to no consequences and strictly seen this was the case in this study, as the choices led to no branching within the game and therefore to the same outcome. While the choices did not actually have consequences, they might have been perceived as being consequential. I did create choice options that I thought would not be seen as consequential (e.g. choosing between a soup or sandwich), I however cannot be sure that they were also perceived this way as I did not ask participants about their perception of the option's consequentiality. One participant mentioned at the end of the study that they felt that their choices did not really have consequences for the game: "At times, I wasn't sure that my answer mattered - that no matter what I picked the game would have progressed in the same way.". Future research might look into the relationship between actual consequentiality and perceived consequentiality and find out if, how and when they differ from each other. Something else that might be worth investigating further is how much of the enjoyment stems from control over the character or alternatively from making choices for the character. While it is common in games research to see control as being important in games (Rogers et al., 2016; Vorderer et al., 2004), the aspect of choice-making is not as thoroughly explored but might be equally important - at least in certain games or game genres. Something else that might be game genre specific is the replication of Ferchaud and Sanders (2018)'s finding that homophily and perspective-taking as two of Downs dimensions specifically predict enjoyment. Future research might look into why exactly these dimensions are predictors of enjoyment and if this is a game genre specific phenomena or if this is found cross genre.

Conclusion

Choices are a central part of digital games. They allow us to control our game characters, make decisions for them and influence the course of the game. Especially in narrative games, choices are an important tool. For these narrative-based games, Mawhorter et al. (2014) presented a Theory of Choice Poetics, which aims to be a “framework for understanding the narrative effect of choices”(p. 1). One choice idiom presented by Mawhorter et al. (2014) is the flavour choice - a choice with relatively minor to no consequences - a choice that is made for fun and not to reach a certain goal. A choice that might stand in contrast to Steinemann et al. (2017)’s claim that “decisions must feel meaningful and offer clear consequences with emotional ramifications for the player”(p. 63). This is also a choice that might be important in contributing to the players’ identification with their game character (Kway & Mitchell, 2018; Mawhorter et al., 2014).

In my study, 134 participants played a game, half of them played a version with 12 situations where they could make a choice between two (non-consequential) options, the other half did not have a choice in those situations and was only given one option to click on. I did not find that the flavour choice group identified more with their game character than the group with no choices. Upon examining the identification dimensions, I found that while homophily was the same for both groups, the flavour choice group had slightly higher levels of perspective-taking and embodiment, while the no choice group showed slightly higher levels of physical similarity and wishful identification. I discussed how this might be evidence for different types of identification, which can be described as the sense of being *with*, being *as* or being *like* and how these might be applicable to different media. My findings might also support Downs et al. (2017)’s proposed polythetic structure of identification, where every individual has different needs that need to be fulfilled in order to identify. I found that flavour choices led to more enjoyment, explaining this through the perceived control and Polman and Vohs (2016) finding that choices that are made for others can be experienced as enjoyable as they bear no consequences for the self. However, further

research is required to understand the underlying mechanism of this matter. Lastly, I was able to replicate the finding that identification leads to enjoyment, extending the finding onto narrative games. I also replicated Ferchaud and Sanders (2018)'s finding that homophily and perspective-taking predicted enjoyment, but I could not give an explanation why exactly these two dimensions predicted enjoyment. I therefore suggest that this also be further investigated.

While I was not able to support my hypothesis that flavour choices have an effect on identification, I can confidently say they are important as they influence the enjoyment experienced during gameplay.

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Appendix

Table 2

The Polythetic Model of Identification (Downs et al., 2017)

Embodiment	<p>I feel like I am inside this avatar when playing.</p> <p>When playing I am transported into this avatar.</p> <p>When I am playing it feels as if I am this avatar.</p> <p>In the game it is as if I've become one with the avatar.</p> <p>When playing, it feels as if the avatar's body becomes my own.</p> <p>In the game it is as if I act directly through this avatar.</p>
Value Homophily	<p>This avatar has the same attitudes as me.</p> <p>The avatar has the same values as me.</p> <p>This avatar has the same attitude toward winning as I do.</p> <p>This avatar has the same attitudes toward how the world works as I do.</p> <p>The avatar has the same beliefs as I do.</p> <p>The avatar has the same attitude toward authority as I do.</p> <p>The avatar has the same attitude toward men as I do.</p> <p>The avatar has the same attitude toward women as I do.</p> <p>The avatar has the same attitudes toward helping people as I do.</p>
Physical Similarity	<p>I physically resemble this avatar.</p> <p>My appearance is similar to this avatar.</p> <p>I don't look anything like this avatar.</p> <p>This avatar has an appearance like mine.</p> <p>This avatar shares many physical characteristics with me.</p>
Wishful	<p>Sometimes I wish I could be more like this avatar.</p>
Identification	<p>The avatar is someone that I would like to emulate.</p> <p>The avatar is the kind of person I would like to be myself.</p>

Perspective-Taking	<p>I tend to understand the reasons why this avatar does what he or she does.</p> <p>I often understand game events in the same way this avatar understands them.</p> <p>While playing the video game, I can feel the emotions this avatar portrays.</p> <p>During game play, I feel like I can really get inside of this avatar's head.</p> <p>I often feel like I know exactly what this avatar is going through.</p> <p>I think I have a good understanding of this avatar.</p>
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Liking	<p>I like this avatar.</p> <p>I dislike this avatar.</p> <p>I have positive feelings toward this avatar.</p> <p>I feel like this avatar is interesting.</p>
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Table 3

The enjoyment/interest subscale of the Intrinsic Motivation Inventory (McAuley et al., 1989; R. M. Ryan, 1982)

Interest /	I enjoyed doing this activity very much.
Enjoyment	<p>This activity was fun to do.</p> <p>I thought this was a boring activity.</p> <p>This activity did not hold my attention at all.</p> <p>I would describe this activity as very interesting.</p> <p>I thought this activity was quite enjoyable.</p> <p>While I was doing this activity, I was thinking about how much I enjoyed it.</p>
