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## **Opting for Violence in Narratives and then Enjoying it**

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Data on the enjoyment of violence in fiction have been mixed in identifying the source of enjoyment. We argue that violence is more likely to be perceived as enjoyable when it is paired with recipient choice and creation of aesthetic distance. We presented participants with short stories of 6-11 sentences and twice gave them choices between low or high violence for the protagonist's actions. Participants who opted for high degrees of violence reported significantly higher satisfaction with the overall story. In contrast, when we presented participants with the same stories without reader choices, participants rated the stories with higher violence as significantly less satisfactory than the lower violence stories. To interpret these data, we suggest that opting for high violence in fiction serves as a gate for enjoyment by creating a zone of control and one detached from morality. Enjoyment of high violence in fiction is driven by an active creation of aesthetic distance which includes moral disengagement. People who did not have a choice or did not opt for high violence felt low levels of satisfaction, felt guilty for the low violence, and did not create a zone of aesthetic distance to enjoy the story.

### **Keywords:**

Violence/Aggression

Fiction

Narrative

Moral detachment

Interactive fiction

Aesthetic distance

## **Introduction**

Fiction, media, and entertainment contain frequent presentations of violence, the effects of which have been the frequent source of debate and consideration. In this paper, we will focus on the enjoyment of violence in interactive or participatory fiction where readers get to make choices about plot development and will compare our findings to fiction where readers cannot make choices. We will examine under which conditions people are more likely to opt for highly violent plot developments and we will study how different options for low and high levels of violence affect the overall satisfaction with the story and when people show signs of regret after violent choices. Our results indicate that it is not simply predisposition or trait that leads people to enjoy highly violent stories. Rather, we suggest that the choice for high violence is potentially available to all or most people. And when people make this choice for highly violent stories, they are much more likely to enjoy the story. With the act of choosing high violence, people claim agency over the media content, simply by their act of choosing. These findings are significant to understand the appeal violence has for media users. The appeal might not so much be to satisfy a disposition, but rather an act of creating or choosing stories that break out of the ordinary and thus open an aesthetic zone for enjoyment. To the best of our knowledge, no studies so far have examined violence in choice-making in such stories.

The vicarious enjoyment of violence in the media has been well documented but without data that point to a single consensus. Violence in television broadcasting has been shown to lead to greater enjoyment in viewers (Raney & Depalma, 2006; Raney & Kinally, 2009; Portel & Mullet, 2014). However, other studies illustrate that graphic violence in television dramas decreases

enjoyment (Wilson & Weaver, 2009). Moreover, other studies find that the presence of particularly artificial violence in full-length movies does not affect self-reported enjoyment (Sherry & Lubson, 2005; Sekarasih et al., 2015). Thus, it is unclear to what extent violence in media affects enjoyment.

Context for violence seems to play a major role in creating enjoyment. Ferguson et al. (2017) suggest that the enjoyment of violence may rely more on individual preference and context and less on the content itself. The enjoyment of violent horror television has been shown to depend upon personality traits such as aggressiveness with higher levels leading to greater positive response (Lin & Zhan, 2017). The preceding of violent media by films with high eudaimonia, or promotion of human welfare or flourishing, has also been shown to decrease the enjoyment of observed violence (Waddell et al., 2017), indicating the importance of framing. Similarly, Rahim et al. (2015) show that violence in film itself does not evoke enjoyment in participants, but rather related feelings do, specifically eudaimonia. Fittingly, some studies suggest that it is violence's relation to meaning and narrative, not violence alone, that makes violent media enjoyable (Bartsch & Mares, 2014; Gunter, 2018).

Active participation in mediated violence, as in game playing, however, may produce different responses than passively viewing violent behavior. Playing versus watching violent video games has been shown to increase aggressive behavior in boys but not girls (Polman et al., 2007). Furthermore, a number of personality traits have been shown to increase preference for violent video games, such as aggression and risk taking behavior (Greene & Krcmar, 2005; Krcmar & Kean, 2009; Krcmar 2014; Hartmann et al., 2014; ), everyday sadism (Greitemeyer & Sagiolou 2017), individual arousal seeking tendencies (Xie & Lee, 2010), and player identification (Konijn et al., 2007). However, desensitization over a period of exposure to violence has been shown to increase individual enjoyment of violent media through moral disengagement regardless of

initial traits (Fanti et al., 2009; Hartmann et al., 2014). Fittingly, studies suggest a positive relationship between moral disengagement and playing violent video games through emotional desensitization (Stockdale et al., 2015; Liu et al., 2015; Gizzard, 2016; Teng et al., 2017). Thus, while preference for violent video games relies on a complex set of personality traits, playing violent video games itself increases preference for them.

However, Flesch (2007) has suggested that most fiction is perceived as enjoyable when moral goals are accomplished and the bad guys get their comeuppance. Consistent with this hypothesis, unjustified violence in video games has been shown to produce guilt in empathetic players (Hartman et al., 2010). Furthermore, Hartman and Vorderer (2010) illustrate that within a violent video game, fighting for a just purpose, perceiving order, and a framework that establishes the situation as “just a game” increase enjoyment and decrease guilt. Interestingly, these researchers also find that making opponents non-human and portraying just consequences do not affect levels of guilt. Yet Manhood and Hanus (2017) show feeling “wrapped-up” in a narrative makes players more likely to feel guilty about immoral actions they commit in video games. Therefore, further research needs to be done on guilt and virtual violence, especially in narrative form.

Key factors for enjoyment of violence are control and agency. Studies suggests that violent video games provide adolescent boys with a context to voluntarily control the emotional situations they confront, meaning it is control, not violence itself, that makes violent video games pleasurable (Jansz, 2005; Pryzbylski et al., 2009; Kneer, 2016; Riddle et al., 2018). In this model, feeling enjoyment from violence may rely on identifying violence as an indicator of situational moral disengagement that in turn allows for pleasurable identification with the violent character and a feeling of increased agency and accomplishment (Janicke & Raney, 2017; Hartmann, 2017). Similarly, Vaughan and Ronni (2017) hypothesize that people understand

their engagement with fictional violence as a way to understand the real world, regulate arousal, and experience a just world.

Aesthetic distancing may also play a role in the moral disengagement that allows for enjoyment and pleasurable narrative control. Keith (1999) suggests that narrative fictions and games allow people to navigate through structures and settings distanced from reality, promoting emotion in the creative making of a world. Similarly, Koopman and Hakemulder (2015) propose a “multi-factor model” of reading in which fictional narratives evoke aesthetic distance that allows for suspension of judgement, role-taking, and empathy.

An additional factor that may promote disengagement and make violence more enjoyable is humorousness. The prevalence and enjoyment of comedic violence in popular media has been long noted (McIntosh et al., 2003). Traits that may generally make violence comedic are justifiability, high surprise, a low level of moral violation, and a facilitating context, such as a movie setting (Brown et al., 2013; Gulas et al., 2017). Contrastingly, the factors that make violence more impactful and less immediately enjoyable have been shown to be its truth value, its real world relevance, and its psychological and moral implications (Bartsch et al., 2016). Yoon (2015) finds that positive response to specifically comedic violence in commercials is controlled by individual social norms regarding violence. Gender identity also has been shown to affect perceived humor of violence with men and women. Both genders equally identify humor in low violence ads, but men more frequently perceive comedy in high violence ads, which in turn leads to great enjoyment (Yoon & Kim, 2014).

What we do not know is how making particular choices affects enjoyment in fiction. While we know that participation, control, and agency seem to be a positive factor for the enjoyment in video games, it is not clear whether particular choices or the very fact that one has a choice

drives this enjoyment. There are many open questions in regard to the precise mechanisms behind the enjoyment and the interplay between control (agency), moral disengagement, enjoyment (satisfaction), and also regret (morality). For example, it is not clear whether the rules of morality are actively suspended in game playing and fiction or are merely paled and overshadowed by other interests. Also, when do people feel regret for making violent choices and how does this affect future choices and enjoyment?

In this set of studies, we focus on interactive fiction. We offer our participants two choices in a short story between high and low violence and we ask them questions concerning their satisfaction, involvement, and perception of morality. We do not distinguish between enjoyment and satisfaction, though it might be possible in different designs to distinguish between more subject-focused enjoyment and more object-related satisfaction.

As we explore the role of violence in stories, we wish to examine the following questions:

- 1) When presented with the option between a highly violent choice and a less violent choice in an interactive story, which will people choose? We reason that a significant percentage of people will choose highly violent options in stories, but that the majority will opt for lower violence.
- 2) How do more or less violent choices influence satisfaction with a story? We hypothesize that people who make violent choices will be more satisfied with the story and people who make less violent choices will be less satisfied.
- 3) How do people rate the completed stories without choice? We hypothesize that the difference between satisfaction of violent and less violent stories will be low for the completed stories without choices and that overall satisfaction with the choice-guided stories will be higher than with the completed stories.

- 4) Under which genre and perspective conditions are highly violent choices more likely to be made? We hypothesize that people are more likely to opt for violent choices in genres that are removed from realistic scenarios, such as fantasy texts and stylized historical genres, as well as third-person texts.
- 5) Who is more likely to show signs of guilt, the people who opted for a less violent or highly violent story progression? We suggest that the people who opted for a less violent option are more likely to show signs of guilt.

To examine these questions, we created basic stories and different variations of these in different genres and person conditions (second and third person). We reason that different genres create distinctive sets of expectations and levels of detachment that will have an influence on reader involvement, satisfaction, and likeliness for opting for violence. We selected the following four genres for these reasons: the realistic genre portrays everyday life. Fantasy narratives invite greater imagination, creativity, and adventure with violence often being a part of the norm. The Nazi-genre gave participants a stereotypically-formulaic, violent-focused genre where violence and the perpetrator's identity are tied together historically. General history is slightly more removed from modern-day realistic stories, but time is the main factor that separates participants from the story.

## **Study 1**

### **Methods**

In this study, participants were given instructions to “read the following story, choose what comes next, and then write an ending to it.” We generated three short stories that introduced two main characters in conflict with one another. One of these characters is given a motive for being annoyed with the other character, such as noise disturbance. After 4-6 sentences

describing an encounter between these characters, participants were given their first choice of two options about how the story would continue. One choice was slightly violent, such as a slap, and the second was highly violent, such as hitting the other character with a baseball bat. After making the first choice, the participant was directed to a sentence describing the consequences of the action. In the case of the slightly violent action, they read a sentence describing the confusion of the other character. In the case of the highly violent action, they read a sentence describing the injury of the other character. After that, participants made a second choice of what the aggressive character would do next. This could be either an apology or an escalation of violence, such as stabbing the other character. This means that there are four patterns of choices by participants resulting from low violence (=L) and high violence (=V): first slightly violent and then apology (LL); first slightly violent and then escalation (LV); first highly violent and then apology (VL); and first highly violent and then escalation (VV).

After the story, the participants were asked “how satisfied do you feel with the events of the story?” They were given a scale from 0 to 10 with 0 being not satisfied and 10 very satisfied. We collected only whole numbers. They were then asked to add a free-response ending of 1-2 sentences to the story. Finally, they were given the option to “add any other comments about this survey.”

For each story we created four versions, each involving a different genre frame, for the reasons given above: realistic-contemporary, fantasy, Nazi-centered historical, and general historical. In each version, we preserved the reason for the original annoyance, such as noise disturbance; the relationship between the characters, such as being neighbors; and the choices of violent actions, such as stabbing. The violent actions were identical or highly similar, such as stabbing with a pocket knife versus a dagger. The different genres featured appropriate settings. For example, we changed “on Edward’s way to work, he stops at Starbucks to get a morning coffee

and a little breakfast” [realistic] to “on Sir Edward’s way to Griamore Castle, he stops at the Celestial Tree to harvest from of its volatile stardust” [fantasy]. For each version, we also created second and third-person variations. All in all, we created three different stories, each having four different genre versions and two different perspective variations, resulting in a total 24 conditions. All conditions are given in Appendix S1.

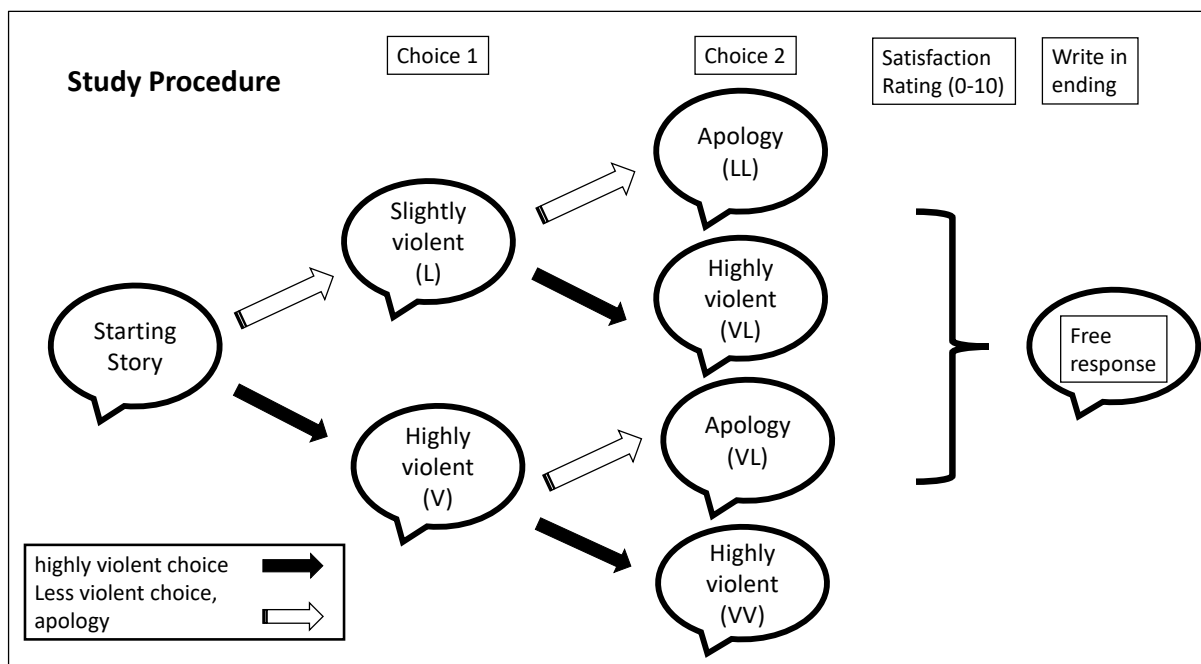


Figure 1. Presented is the order of the tasks for the participants, beginning with making choice 1, choice 2, providing a satisfaction rating, and the adding an ending to the story in free response.

We recruited participants via Amazon Mechanical Turk. For each of the 24 conditions, we recruited 19 to 21 participants, resulting in a total of 483 participants. We collected information on their gender, age, their reading habits in minutes per day, their current or past college enrollment, and their native language. The average age of participants who participated was 33.63 years old, and 251 reported as female and 226 as male. We paid all participants at an approximate rate of \$6/hour.

After the study, three experts evaluated the added free-response endings by the participants. We used 13 classifications for possible endings (Appendix 2). We grouped these classifications into three overall categories: I. Continuation or approval of violence; II. Conciliation and apology; III. Ending with evasion and other endings without further violence or apologies. If at least 2 out of 3 of the experts provided the same rating, we counted that as an agreement.

## Results

Out of 483 participants, 318 (66%) chose the less violent option followed by an apology (LL), while only 22 (4.5%) chose the less violent option followed by an extremely violent option (LV). 65 participants (13.5%) chose the more violent option first followed by an apology (VL) and 78 (16%) chose the extremely violent options both times (VV).

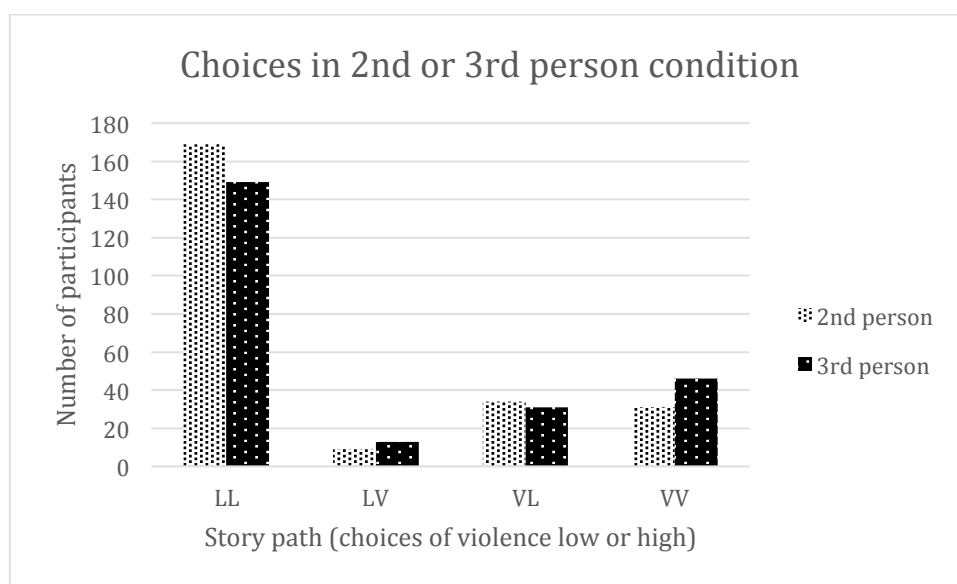


Figure 2. Represented are the number of participants who made particular choices of high or low violence. Data are shown for second-person (“you”) and third-person condition (“he” or “she”).

People in the second-person condition were less likely to choose the more violent option (V) in either the first or second choice than people in the third-person condition (Figure 2).

Additionally, participants were more likely to choose more violent options for their first choice in fantasy narratives.

Violence Level	Realistic [124]	Fantasy [120]	History (Nazi) [121]	Historical (General) [118]	2nd Person [243]	3rd Person [239]	Overall [482]
LL	83 (66.9%)	63 (52.5%)	82 (67.8%)	90 (76.3%)	169 (69.5%)	149 (62.3%)	318 (66%)
VL	17 (13.7%)	22 (18.4%)	14 (11.5%)	12 (10.1%)	34 (14%)	31 (13%)	65 (13.5%)
LV	6 (4.8%)	4 (3.3%)	6 (5%)	6 (5.1%)	9 (3.7%)	13 (5%)	22 (4.5%)
VV	18 (14.5%)	31 (25.8%)	19 (15.7%)	10 (8.5%)	31 (12.8%)	46 (19.3%)	77 (16%)

Table 1. Given are the absolute numbers or percentages of participants who made certain choices in the plot. Data are organized by genre and person-condition.

Participants expressed higher satisfaction when they had opted for high violence on their second choice with an average of 4.48 for LL and 4.32 for VL compared with an average level of 6 for LV and 6.52 for VV (overall SD= 2.87). An ANOVA test revealed that a statistically significant difference existed between the satisfaction ratings of the four conditions [ $F(3, 476) = 13.58, p < .001$ ]. Hence we performed a Tukey post hoc test, which revealed a significant difference in participant satisfaction between the LL and VV conditions only ( $P < .001$ ). The differences between the mean satisfaction between LL and LV and between VL and LV conditions, while not significant, were notable (1.52 and -1.68, respectively).

We see similar patterns across all of the different genres with these levels of satisfaction as seen in Table 2.

Violence level	Realistic	Fantasy	History (Nazi)	Historical (General)	2nd Person	3rd Person	Overall
LL	4.28	4.53	4.68	4.44	4.24	4.74	4.47
VL	5.7	4.32	3.93	2.83	3.94	4.74	4.3
LV	4.17	7.5	6.5	6.33	6.67	5.54	6
VV	7.18	6.26	6.32	6.6	6.84	6.3	6.5

Table 2. Given are the satisfaction ratings by genre, perspective, and choices made by participants.

The average satisfaction for the double highly violent option (VV) is comparatively high regardless of the genre type while the less violent option followed by an apology remains relatively low. This perceptibly higher overall satisfaction in the third-person condition corresponds to the higher rate of choice for the more violent options in third person.

The expert ratings of the participant-added endings yielded high agreement with all 3 experts usually agreeing; only 3 of the endings could not be classified into one of the three categories. Participants who added an ending in category I (continuation of violence or approving of violence) were overall more satisfied with the story and had a satisfaction rating of 5.53. Participants who added an ending in category II (conciliations and apologies) were much less satisfied with the story and had a satisfaction rating of 4.27. Participants who added an ending in category III (ending with evasion and other endings without further violence or apologies) expressed satisfaction at 4.92. Note again: Participants rated their satisfaction before adding the ending. The correlation between adding an ending in category I and making violent choices (VV) was high, as was the correlation of endings in category II and LL (for example, 81% of participants who opted for VV added an ending in category I) (Appendix S2).

As shown in Table 3, males were more likely to opt for violence and also expressed higher satisfaction for all conditions. There also was a difference in satisfaction between men and women. Men said that they were more satisfied than women regardless of the choices they made.

	LL	VL	LV	VV
Women	181 (4.13)	39 (4.02)	9 (4.22)	22 (5.35)
Men	135 (4.95)	26 (4.76)	12 (7.42)	53 (6.96)

Table 3. Shown are the absolute numbers of males and females making specific choices and their average satisfaction level with the overall story in brackets. 6 participants chose not to reveal their gender.

## Discussion

The participants who made more violent choices expressed significantly higher levels of satisfaction with the story, especially if their last option was for high violence. As expected, people were much more likely to make highly violent choices in the fantasy genre than in any of the other genres (perhaps because of a distancing effect in that genre). Remarkably, the satisfaction rating in the fantasy genre condition displayed the same pattern as in the other genres, meaning the participants were most satisfied if their second choice was highly violent. These findings suggest that it is not predisposition or specific traits alone that drive satisfaction (though connections of satisfaction and predisposition have been found; see Xie & Lee, 2010; Krcmar 2014; Greitemeyer & Saglioulou, 2017). Rather, people are more satisfied *when* they opt for the highly violent choice (in their final option). In short, *people are more satisfied with the story when they make violent choices or they become satisfied by making the violent second choice*. The choice for high violence seems to operate as a gate for higher satisfaction.

Relatively few people changed their choice path (393 stayed committed to either high or low violence twice, while 87 changed their path). This is in line with theories of cognitive dissonance that state people show a preference for consistency and tend to stay committed to their choices (Gawronski & Strack, 2012; Festinger, 1957). Consistency can occur as an escalation of commitment (Staw, 1981) or can correspond to the wish to appear consistent in the eyes of others (Guadagno & Cialdini, 2010). Those who changed were much more likely to switch from high violence to low violence (apology), rather than increasing violence. We interpret this as a sign of guilt by participants who saw the outcome of their first choice and recognized it as morally wrong. Guilt may also explain the low satisfaction of participants who always chose the less violent option first and then an apology, for in their first choice they were forced to choose a violent action even if they did not want to. Consequently, guilt seems to detract from the entertainment aspect of the stories, and people enjoyed the stories less when choosing to apologize for their second choice in the story. In line with previous studies (Polman et al., 2007; Hartmann et al., 2014), the data regarding male and female satisfaction discrepancies suggest that men may feel more comfortable than women with violence in narratives.

These findings beg various questions. For example, it is unclear what exactly people rate when they rate “how satisfied do you feel with the events of the story”: Is their rating more an appreciation of their own choice or an appraisal of the resulting story? To address these questions, we designed the following studies.

## **Study 2**

We created a follow-up study to investigate to what extent the choice-making process itself influenced the satisfaction ratings. Instead of being given the opportunity to make choices as in

Study 1, participants were randomly given a completed version of the story with the choices already made. We selected Story 1 because it correlated most closely to the overall pattern of satisfaction in the genre categories and perspective conditions (correlation of  $r(483) = .76$  compared to the overall average of satisfactions for all paths and versions). We created 32 versions of Story 1, namely all four paths for the realistic, fantasy, Nazi-centered historical, and general historical genre with either second- or third person-perspective, as participants had seen in Study 1, but wrote each of the possible outcomes as part of that story. For example, a participant would receive a second-person, realistic story with the slightly violent action followed by an apology (LL) already woven into the story (Appendix 1). Participants read one of these 6-11 sentence narratives and immediately afterwards rated their satisfaction with the story on a scale from 0 to 10, as in Study 1 ("How satisfied do you feel with the events of the story?"). After answering this question, they received four more rating questions about the story in random order: "How much fun was this story to read?", "How realistic was the story?", "How important was the morality of the main character in this story to you?", and "How strongly did you identify with the main character (the aggressor)?" Each of these questions was also rated on a scale from 0 to 10 with 10 being the highest and 0 being the lowest. Participants were randomly assigned a story version. Each of the 32 versions was rated by 8-11 participants, for a total of 295 different raters.

## **Results**

Participants who had no choice in the story progression consistently reported lower satisfaction with the highly violent stories (VV), 2.27 (SD=2.56) than with the lower violent stories (LL), 3.87 (SD=2.51). These results are diametrically opposite to the results from Study 1 where participants had a choice in creating the story paths (Figure 3). Participants in Study 1 with choices tended to feel highly satisfied with the story after making highly violent choices (ratings of 6.5), while Study 2 shows that readers of the same highly violent completed stories who had

no choice were unsatisfied (ratings of 2.27). In general, participants who had choices were more satisfied. Only the lower violence condition (LL) had similar ratings for both conditions (Figure 3). The differences are significant for all values, including LL (for LL  $t(104) = -2.32, p < .011$ ; for VL  $t(127) = 3.08, p < .001$ ; for LV  $t(32) = 5.59, p < .001$ ; for VV  $t(240) = 7.19, p < .001$ ).

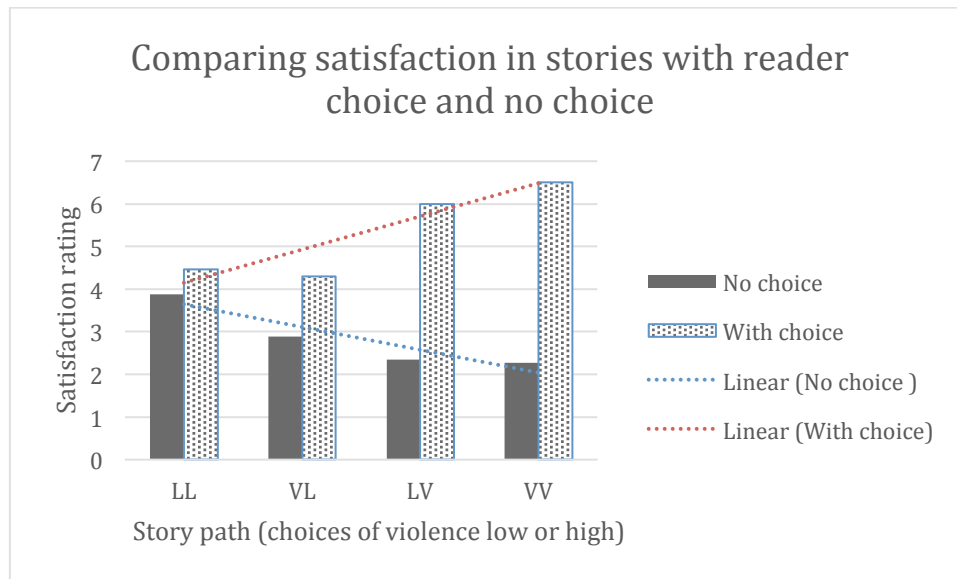


Figure 3. Satisfaction ratings by participants who had choices or had no choice in the plot development of the story, presented by story path (low and high violence).

Participants also reported that the highly violent stories (VV) were less realistic; that they were less fun than the lower violent stories; and that personally, they identified less with the protagonist (Table 3).

	Satisfaction	Realistic	Fun	Morality	Identify
LL	3.87	3.17	5.37	5.31	3.39
VL	2.89	2.82	3.9	6.31	2.1
LV	2.34	1.85	4.14	4.99	1.81

VV	2.27	2.03	3.82	5.47	1.3
N=295					

Table 4. Shown are the satisfaction ratings by participants of the completed stories with no choices for participants, as well as other ratings collected after the satisfaction rating.

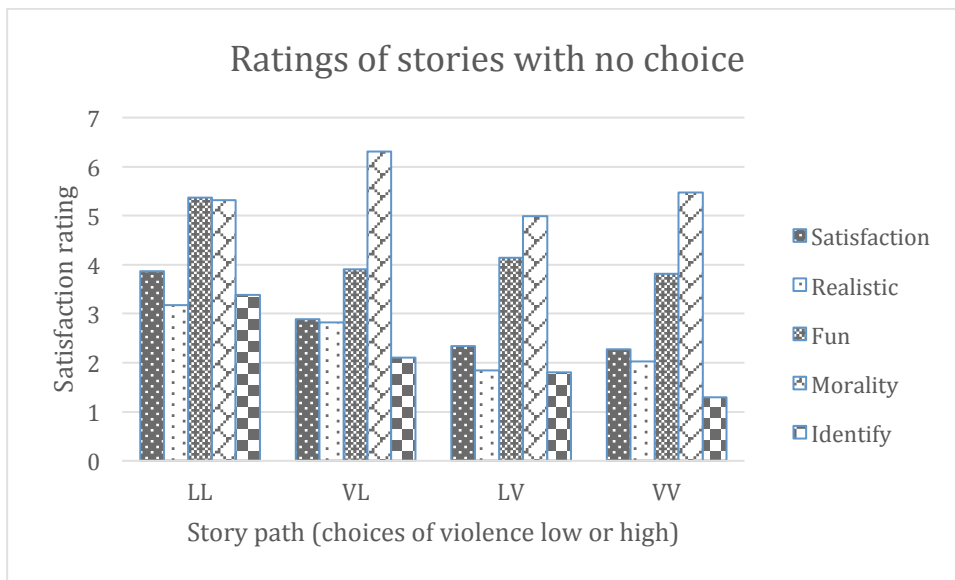


Figure 4. Represented are the ratings of five criteria, including satisfaction, grouped by story paths from Study 1, such as the low and high violent choices. Participants in this study had no choice but were presented with the completed stories.

The genre conditions did not create strong differences in most ratings. The fantasy genre generated somewhat higher ratings in satisfaction, fun, and identification and lower ratings in realism. The historical Nazi genre created the lowest morality rating, though still close to 5, perhaps because of the stereotypical nature of this genre and period.

Genre	Satisfaction	Realistic	Fun	Morality	Identify
Realistic	2.71	2.59	4.05	6.03	2.13
Fantasy	3.49	1.15	5.26	5.23	2.85

History Nazi	2.6	3.17	4.03	4.97	1.8
History General	2.58	2.94	3.93	5.82	1.83
N=295					

Table 5. Given are the ratings of five criteria, such as satisfaction, according to the genres of the presented stories.

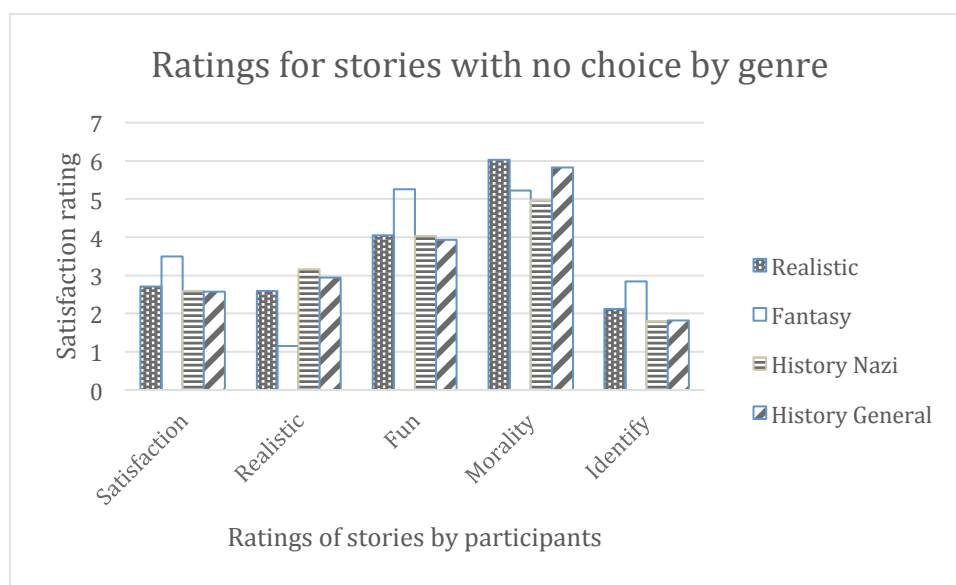


Figure 5. Represented are the ratings of five criteria, including satisfaction, grouped by the genres of the stories. Participants in this study had no choice but were presented with the completed stories.

There was a small subgroup of 14 participants for the high violence condition (VV) that showed a satisfaction rating above 5 (n=74), while 50 participants gave ratings of 0-2.

## Discussion

Study 2 shows a consistent pattern: The more violent the complete story was that participants read, the less satisfied they were. Overall, participants seemed less engaged in the more violent stories, reported low levels of fun and satisfaction, did not identify much with the character, and

did not see the story as realistic. These findings are opposite to the findings of Study 1 (Figure 3). Combined, these findings strongly suggest that choice-making has a central influence on satisfaction in the case of highly violent choices. Consequently, as previous studies have suggested, control of the narrative seems particularly linked to enjoyment of violence (Pryzbyski et al., 2009; Kneer et al., 2016; Janicke & Raney, 2017; Hartmann, 2017).

Study 2 helps to address what people rate when they provide their satisfaction levels. The ratings of Study 1 express less an appraisal of the resulting story because in that case the ratings would be more consistent to the ratings of Study 2, but rather reflects an appreciation of their own choice.

One possible explanation for the discrepancy is that readers who had choices and who opted for high violence “detached” themselves from realistic expectations, while the readers who opted for less violent choices did not actualize the detachment and readers who were presented with the completed stories without choice did not have that detachment option. In that case, satisfaction in the highly violent condition with choice would mean an appreciation of one’s own impact: I am satisfied with the story since I liberated (detached) it from the regime and expectations of normal life.

As noted, a small subgroup of participants (14/74 or 19%) expressed higher satisfaction with the high violence condition (VV). This is in line with previous research (Krcmar & Kean, 2009; Krcmar 2014; Hartman et al., 2014; Lin & Zhan, 2017). We considered the theory that choice plays no role for satisfaction, in which this minority of participants would create a difference between the choice and no choice conditions because of their different impacts in Study 1 and Study 2. In this theory, in Study 1 this minority that prefers violence is more satisfied by making more violent choices, thus creating an upward slope of satisfaction ratings. However, in Study 2

where we eliminate self-selection (choice) and randomly assign story conditions, only a quarter of the minority would receive the VV condition and correspondingly the satisfaction of the minority would be masked by the distaste of the majority. While this theory could not explain the overall findings and the data concerning higher options for high violence in the fantasy genre paired with higher satisfaction, it might have had a small impact on the data.

### **Study 3**

We next set out to explain the curiously high satisfaction ratings for highly violent stories when people get a choice (Study 1). In particular, we wanted to know at which point in time participants reach their ratings of satisfaction, before or after seeing the outcomes of their choices. We asked, along the lines of the suggestions at the end of Study 2, what the first act of making a choice entails. Do people detach themselves from realistic expectations when selecting high violence? Do they enter some space of aesthetic enjoyment, detached from morality? Do they seek the most unusual story? Does the satisfaction emerge more slowly after making a second choice, confirming high violence? Or does the satisfaction emerge from seeing the outcomes? To examine these options, we created a task to measure anticipated satisfaction after the first choice and before seeing any outcomes. Put differently, we wanted to know whether satisfaction is driven by choice-making, by confirming original choices (second choice), or by outcomes.

### **Methods**

We created a survey based on Study 1 with one addition: right after making their initial choice and before seeing the outcome of that first choice, we inserted questions about the reasons why participants made their choice between a slightly violent and a highly violent option. We could not include these questions in Study 1 since such a question would have likely resulted in

priming effects for the later tasks. Similar to Study 1 and 2, participants had a sliding scale from 0 to 10 and we recorded only whole numbers. The first question asked participants, "Predict how satisfied you will be with the story based on your choice for how the story should continue" in order to test if people's predicted level of satisfaction with their first choice would be similar to their actual satisfaction rated in Study 1. Afterwards, participants were asked: "To which degree did each factor influence your choice about how the story should continue?" They ranked the following on a sliding scale with the quoted explanations: realism ("because the story would be realistic"), fun ("because the story would be fun"), morality ("because the story would be less immoral"), curiosity ("because I am curious to see what comes next"), violence ("because I am interested in violence"), and distaste ("because I dislike blood and brutality").

As with Study 2, we used Story 1 because it correlated most closely to the overall pattern of satisfaction in the genre categories and perspective conditions. We used the 8 versions of Story 1 also used in Study 2. 194 participants rated one of the eight story conditions, with 33-57 for each genre condition.

## **Result**

Participants who chose the highly-violent first option predicted a higher level of satisfaction with the entire story (5.32) already before making the second choice or seeing the outcome of the choice than those participants who made the less violent option (4.16). The values are significantly different ( $t(107) = -4.29, p < .001$ ). (In comparison, after making two choices and seeing the outcomes, satisfaction was 6.5 for VV and 4.47 for LL in Study 1.) Those who chose the highly violent first option reported, after their satisfaction rating, that their choice was strongly influenced by their thought that it would be "fun" (5.7) and their curiosity (6.13), while those who chose the less violent option reported a strong "dislike for blood and brutality" (5.66)

as well as importance of the morality in the story (5.31). Neither group expressed great interest in violence (Table 6).

choice	Predicted Satisfaction	Realism	Fun	Morality	Curiosity	Interest in violence	Distaste for violence
L	4.16	4.83	3.78	5.31	5.76	2.62	5.66
V	5.32	4.81	5.7	3.11	6.13	3.81	2.83

Table 6. Given are the averages of how participants rated the importance of various factors after their first choice for either high or low violence.

There are a few differences in the ratings separated by genre and person condition (Table 7). There are small but consistent differences between second- and third-person conditions, similar to Study 1. Participants rated higher levels of curiosity, the importance of morality, fun, and realism in the second-person stories in addition to somewhat higher predicted satisfaction ratings. However, the largest difference between second and third-person ranking was .7, giving relatively consistent ratings across both perspectives.

Genre/ person	Predicted Satisfaction	Realism	Fun	Morality	Curiosity	Interest in violence	Distaste for violence
Realistic	4.36	4.36	4.23	5.04	5.23	2.91	5.26
Fantasy	5.54	5.02	5.46	3.88	6.19	3.19	4.01
History Nazi	4.47	4.94	3.44	5.28	5.25	2.22	4.75
History General	4.3	5.02	3.84	4.81	5.58	3.19	5.31
2nd- person	4.9	5.05	4.64	4.99	5.99	3	4.7

3rd-person	4.51	4.65	4.06	4.48	5.29	2.92	5.01
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Table 7. Shown are average ratings of various factors grouped by genre and perspective after participants made their first choice.

## Discussion

The ratings show that people are predicting a significantly higher satisfaction when opting for high violence already at the point of making the first choice. This indicates that satisfaction does not arise from the presented outcomes, though we cannot exclude that participants anticipated outcomes already when making the choice. It also suggests that the satisfaction cannot alone be explained by prediction-reward theory since participants did not see the outcomes. Since there was only one choice, we cannot measure the effect of path-switching costs.

What happens at the moment of making the first choice? We see that those who choose the most violent option indicate that morality is not as high of a concern for them, supporting the disengagement theory supported by previous studies (Fanti et al., 2009; Hartmann et al., 2014; Teng et al., 2017). In line with this theory, as moral investment in violence goes down, the prospect or expectation of fun goes up. However, there is also the question of whether people detach themselves from reality altogether. The ratings for realism (“because the story would be realistic”) are close to equal in both conditions. Hence, there is no evidence of a detachment from reality in making the decision for high violence or difference in satisfaction. Instead, people seem to opt for “fun” against morality and are not hindered by a dislike for blood and brutality. With making the first choice for violence, they seem to enter a zone of aesthetic distance and enjoyment that raises the expected satisfaction significantly. That is to say, the decision for high violence affirms and expresses the act of their own choosing. In short, there is evidence that the high satisfaction ratings that follow choices for high violence are likely to reflect an appreciation of one’s own impact on the story and less an appreciation of the resulting story. Reversely,

those who initially chose the low violence option for reasons of either morality or distaste of violence would not be exercising as great a control of the story, for either of these reasons exerts an agency over them. In other words, their choice did not feel like a choice.

## **Overall discussion**

Overall, people who opt for highly violent choices in fiction are more satisfied with their stories more than people who opt for less violent choices (Study 1). This effect disappears and reverses when there is no choice (Study 2), see Figure 3. The results of all three studies suggest a correlation between control and detachment; it is when participants are given control of a situation and execute it by opting for high violence that they find greater satisfaction, before presented with outcomes.

What explains this effect? Our studies suggest that neither outcomes of the stories nor prediction reward can explain the high satisfaction. Participants already anticipated high levels of satisfaction after making the first highly violent choice before seeing the outcomes, and likewise anticipated low levels of satisfaction when making the low level violent choice (Study 3). Although genre affected how many people opted for more violent options, it did not affect how satisfied they were with their choices. Consequently, while gender and likely other individual traits moderate the effect of enjoying violence, our studies suggest that the *act of choosing* high violence plays a key role in higher satisfaction.

What does the act of choosing high violence entail? From our data, it seems that people who opt for high violence do not connect this option with a detachment from reality (Study 3). In this respect our findings differ from suggestions one could derive from Waddell et al. (2017) who showed that induced cues of reality lead to lower enjoyment. In contrast to our studies, Waddell et al. did not offer participants choices. Participants in our studies instead mentally connected their initial choice for high violence with an opting-out of morality and an opting-in for fun (Study 3). Therefore, the very act of opting for high violence seemed to liberate people from constraints of morality and responsibility and thereby open an aesthetic realm of fun and satisfaction. Furthermore, by exercising the option to enter this aesthetic realm of enjoyment, the participants would also gain control of the narrative in a way that previous studies suggest is pleasurable (Prybylski et al., 2009; Kneer et al., 2016; Janicke & Raney, 2017; Hartmann, 2017). Without that willful choice, there was very low satisfaction for high violence.

Hence, we suggest that the choice was not symmetrical, but rather a choice to break away from the morally right standard or instead to remain with the expected standard. Only the people who exercise the break-away received the reward of feeling control and aesthetic liberation—that is, only for these people the choice presented itself as a true choice. For those who opt for high violence, violence appears as a gate to take control and make a story more interesting and explorative rather than a definite moral violation. However, it does not seem to imply that people who opt for violence in stories are losing touch with reality or that they are interested in violence in general (Study 3). Rather, the correlation of violence and high satisfaction suggest a sense of aesthetic freedom in participants' ability to detach from violent choices in a story. Our studies indicate that choosing highly violent actions in narrative produces higher satisfaction because it allows for a great sense of control, which is itself pleasurable (Krcmar & Kean, 2009; Krcmar 2014; Hartman et al., 2014; Lin & Zhan, 2017).

Unlike those who chose the more violent option first, the participants who opted for lower violence made a choice to *avoid* an action that they saw as immoral or distasteful. Whereas choosing the more violent option may be characterized as a “positive” choice in that it creates an interesting story and gives the media user agency, choosing the less violent option was for many a “negative” choice in that it primarily serves to avoid an undesired action or result. It is reasonable to assume that those who make the “positive” choice would feel a higher sense of control than those who make the “negative” choice. Given that a slightly violent choice still included violent content, the overall (Study 1) and predicted (Study 3) satisfaction for those who opted for low violence was thus low as a result of both the lack of control and the feeling of guilt. Perhaps these people also felt unsatisfied for denying themselves the more interesting choice. It also seems that guilt can lower the sense of control by enticing moral inhibition. This guilt can either be drawn from the consequence of the actions (Study 1) or from the projection of the consequences of the action (Study 3), therefore lessening the level of satisfaction. Participants who opt for the highly violent choices seem to put guilt aside and instead enjoy entering a different zone.

This interpretation is also in line with the results of Study 2, for the levels of satisfaction were generally lower regardless of level of violence, implying that it is the shaping of the narrative that makes violence pleasurable. Thus, our data, like those of preceding studies, altogether suggest that it may be the control that makes violence in interactive media enjoyable in addition to a degree of moral detachment and aesthetic distance. What our studies add to previous findings about control is this subjective *sense* of control since all participants objectively had choices and thus control in Study 1, but only those participants who opted for high violence had the subjective *feeling* of exercising control. Only by opting for violence could the gate for fun open.

These studies thereby offer potential insight into the effects of engaging in interactive media in general. In this proposed framework, it is not that people enjoy violence but that they accept it in media as a route to a sense of control and agency that is satisfying. If it is indeed control and not violence itself that makes violence in interactive media pleasurable, then our studies may shed light on previous examinations of how violent media affect real world behavior (Polman et al., 2007; Fanti et al., 2009; Stockdale et al., 2015; Liu et al., 2017). Specifically, our studies may indicate that violent media does not necessarily foster a liking of violence itself but only a liking of increased agency. In other words, although violence is necessarily an act of control in that the perpetrator asserts his or her self above the victim, our studies may offer an optimistic counterpoint to those papers that claim violent interactive media increase tendencies toward violence (Polman et al., 2007; Fanti et al., 2009; Stockdale et al., 2015; Liu et al., 2017), saying instead that violent interactive media creates only a wish for heightened agency that violence happens to satisfy. The core of the sense of control is to open an aesthetic realm that is liberated from moral concerns.

Furthermore, this study contributes to theories of transmedia storytelling (Jenkins, 2006). Because readers are given the possibility to interact with the story, it seems that this gives them the ability to enter the aforementioned aesthetic realm. This finding gives a sense of justification to the popularity of comics or TV series adapted into videogames and violent fanfictions or RPGs where fans are given an active role into choice-making.

While this disengagement from moral frameworks may be interpreted as a lack of concern for morality, it also contains in it the implicit *recognition* that extreme violence *is not* moral. Thus, our data offer a further optimistic conclusion, namely that although participation in mediated violence may allow for disengagement, it may not alter what people view as moral or even how they view real violence: when presented with only a depiction of violence in Study 2, most

participants viewed it as not very enjoyable. Yet, more research must be conducted on how engagement in mediated violence affects behavior and personality.

A majority of participants chose the slightly violent/less violent choice followed by an apology (66%) while a much smaller portion (16%) chose the highly violent action both times (question 1). After the first choice, people remain committed to their first choice at a high rate of 82% while only 18% switched paths (Study 1), even though the second choice represented a significant escalation of violence. This path loyalty is in line with theories of cognitive dissonance (Gawronski & Strack 2012; Festinger 1957), but is still highly remarkable given the significant increase of violence and thereby of moral and legal consequences for such action.

Question 2 asked how more or less violent choices influences the satisfaction with a story. Participants who made highly violent choices rated higher satisfaction ratings of the stories regardless of genre or perspective. When participants had no choice, they rated higher violence as significantly less satisfying than low violence stories. We had incorrectly predicted that the satisfaction difference between the different completed stories with no choices would be insignificant. However, to answer question 3, those who made less violent choices showed lower satisfaction ratings with the stories.

Regarding question 4—under which genre and perspective conditions violent choices were more likely to be made--people were more likely to choose the highly violent options in the genre of fantasy than in realistic, Nazi-centered historical, and general historical genre stories. Third-person stories also produced a higher number of participants who chose highly violent options than in second-person stories a distancing effect that makes violent actions more acceptable when further removed from reality.

In answer to question 5, whether those who make highly violent choices or those who make slightly violent choices are more likely to show signs of guilt, the data suggests that those who opted for the slightly violent action in the first choice display greater signs of guilt for their decision. This is first shown by the selection of choices. 94% of participants followed a low violent first choice with a second apologetic choice and thus stayed committed to their first choice. This is also shown by the added written endings, where participants frequently made their character apologize once again or perform some retributive task in penance for their action. From the 186 participants who added an ending that displayed a form of guilt (conciliation and apology), 77.2% of them had chosen low violence twice (which represents 66% of the total participants) and thus should have had less violence to apologize for, but expressed guilt nonetheless in their endings, such as in statements like: "I go home and feel awful that I lost my temper. I will work on my anger to prevent something like this," and "I then apologize to Ronald for taking my frustrations out on him and ask him to come inside with me for a drink." Only 1% of these apologetic endings came from participants who selected two highly violent choices (who represent 16% of the total participants) (Appendix S2). Choosing less violent options thus seems to be linked to guilt. Participants seem to be feeling guilt for being forced to make an even somewhat violent choice.

The comparative findings from the different genres show that aesthetic distance and enjoyment in violent choices happens the most in fantasy stories. In both second and third-person stories, stories with fantastical characters, settings, and props received not only higher satisfaction ratings but also a greater number of participants who made violent choices. We suggest that the fantasy genre simplifies or encourages the taking of control and option for high violence and that the threshold to an aesthetic realm is lower with more flexible rules of normalacy and morality.

One of the open questions beyond the scope of this paper is whether similar behavior of choosing highly violent actions might occur within the real world. As we suggested above, our study includes evidence that most people seem to be quite clear about the difference between reality and fiction. The choice for high violence includes a recognition of the aesthetic suspension of morality. However, the real world also contains many moments where the lines between fiction and reality are not strictly drawn, including learning about (real) others in form of little stories and gossip that contain elements of fiction. It is possible that the modes of moral detachment we observe in this study apply for these forms of reality as well, with people opting to observe events from some aesthetic distance that allows for the enjoyment of violence, thereby encouraging or accepting higher actual violence, especially when they feel a sense of control in the situation.

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## Appendix

### S1 All Stories and choices

#### Story 1

##### Realistic-Third-Person

John is walking home from work when he sees his neighbor Ronald outside doing some yard work. Ronald often has projects going on outside that makes their whole neighborhood look like it’s under construction, which really irritates John because he really likes everything looking neat and tidy. No one else is outside. As John thinks about this, he decides to approach Ronald and

- a. slap him.

- b. hit him with a baseball bat lying nearby.

- A. Ronald looks at John with a confused expression and asks why John slapped him. John responds by

- c. clapping him on the shoulder, saying he has been stressed at work lately and is sorry for taking that out on him.

- d. taking out a knife and repeatedly stabbing Ronald.

- B. Ronald lies moaning on the ground looking very bruised and bloodied. John responds by then

- e. admitting he forgot to take his medicine that morning and calling an ambulance for medical attention. He apologizes profusely and wants to make things right.

f. taking out a gun and shooting Ronald fifteen times.

### **Realistic-Second-Person**

You are walking home from work when you see your neighbor Ronald outside doing some yard work. Ronald often has projects going on outside that makes your whole neighborhood look like it's under construction, which really irritates you. No one else is outside. As you think about this, you decide to approach Ronald and

a. slap him.

b. hit him with a baseball bat lying nearby.

A. Ronald looks at you with a confused expression and asks why you slapped him. You respond by

c. clapping him on the shoulder and saying you have been stressed at work lately and are sorry for taking it out on him.

d. taking out a knife and repeatedly stabbing Ronald.

B. Ronald lies moaning on the ground looking very bruised and bloodied. You respond by then

e. admitting you forgot to take your medicine that morning and calling an ambulance for medical attention. You apologize profusely and want to make things right.

f. taking out a gun and shooting Ronald fifteen times.

### **Fantasy-Third-Person**

The great giant Griz is walking home through the enchanted forest when he sees his neighbor, a large troll named Ronald, outside collecting some water nymphs to take home. Ronald often collects noisy creatures like sprites, tree elves, nymphs, and miniature unicorns that make their whole section of the forest look like it's a mystical zoo, which really irritates Griz because he likes everything looking neat and tidy. No one else is in the woods. As Griz thinks about this, he decides to approach Ronald and

a. slap him.

b. hit him with a large, thorny branch lying nearby.

A. Ronald looks at Griz with a confused expression and asks why Griz slapped him. Griz responds by

c. clapping him on the shoulder, saying he has been stressed about insurgent fairies lately and is sorry for taking that out on him.

d. taking out a poisoned knife a witch gave him and repeatedly stabbing Ronald.

B. Ronald lies moaning on the ground looking very bruised and bloodied. Griz responds by then

e. admitting he forgot to drink his potion that morning and calling a wizard for medical attention. He apologizes profusely and wants to make things right.

f. taking out a bow and shooting Ronald fifteen times with magical, poisonous arrows.

### **Fantasy-Second-Person**

You are a great giant and are walking home through the enchanted forest when you sees your neighbor, a large troll named Ronald, outside collecting some water nymphs to take home.

Ronald often collects noisy creatures like sprites, tree elves, nymphs, and miniature unicorns that make your whole section of the forest look like it's a mystical zoo, which really irritates you

because you like everything looking neat and tidy. No one else is in the woods. As you think about this, you decide to approach Ronald and

a. slap him.

b. hit him with a large, thorny branch lying nearby.

A. Ronald looks at you with a confused expression and asks why you slapped him. You respond by

c. clapping him on the shoulder, saying you have been stressed about insurgent fairies lately and are sorry for taking that out on him.

d. taking out a poisoned knife a witch gave him and repeatedly stabbing Ronald.

B. Ronald lies moaning on the ground looking very bruised and bloodied. You respond by then

e. admitting you forgot to drink your potion that morning and calling a wizard for medical attention. You apologize profusely and want to make things right.

f. taking out a bow and shooting Ronald fifteen times with magical, poisonous arrows.

### **Nazi History-Third-Person**

It's 1944 and World War II is still raging. Johannes is a German Nazi and is walking home from work when he sees his neighbor Ronald outside doing some yard work. Ronald often has projects going on outside that makes the whole neighborhood look like it's under construction, which really irritates Johannes. No one else is outside. As Johannes thinks about this, he decides to approach Ronald and

a. slap him.

b. hit him with a baseball bat lying nearby.

A. Ronald looks at Johannes with a confused expression and asks why he slapped him.

Johannes responds by

c. clapping him on the shoulder and saying he has been stressed with work assignments lately and is sorry for taking it out on him.

d. taking out a knife and repeatedly stabbing Ronald.

B. Ronald lies moaning on the ground looking very bruised and bloodied. Johannes responds by then

e. admitting he wasn't thinking straight and running to find a doctor for medical attention. He apologizes profusely and wants to make things right.

f. taking out a gun and shooting Ronald fifteen times.

### **Nazi History-Second-Person**

It's 1944 and World War II is still raging. You are a German Nazi and are walking home from work when you see your neighbor Ronald outside doing some yard work. Ronald often has projects going on outside that makes your whole neighborhood look like it's under construction, which really irritates you. No one else is outside. As you think about this, you decide to approach Ronald and

a. slap him.

b. hit him with a baseball bat lying nearby

A. Ronald looks at you with a confused expression and asks why you slapped him. You respond by

- c. clapping him on the shoulder and saying you have been stressed with work assignments lately and are sorry for taking it out on him.
- d. taking out a knife and repeatedly stabbing Ronald.
- B. Ronald lies moaning on the ground looking very bruised and bloodied. You respond by then
- e. admitting you weren't thinking straight and running to find a doctor for medical attention. You apologize profusely and want to make things right.
- f. taking out a gun and shooting Ronald fifteen times.

### **General History-Third Person**

It's 1900 in New York City. John is walking home from his factory job when he sees his neighbor Ronald outside pruning his bushes. Ronald often has projects going on outside that makes the whole neighborhood look like it's under construction, which really irritates John. No one else is outside. As John thinks about this, he decides to approach Ronald and

- a. slap him.
- b. hit him with a baseball bat lying nearby.
- A. Ronald looks at John with a confused expression and asks why he slapped him. John responds by
- c. clapping him on the shoulder and saying he has been stressed with long work hours lately and is sorry for taking it out on him.
- d. taking out a knife and repeatedly stabbing Ronald.
- B. Ronald lies moaning on the ground looking very bruised and bloodied. John responds by then
- e. admitting he wasn't thinking straight and running to find a doctor for medical attention. He apologizes profusely and wants to make things right.
- f. taking out a gun and shooting Ronald fifteen times.

### **General History-Second-Person**

It's 1900 in New York City. You are walking home from your factory job when you see your neighbor Ronald outside pruning his bushes. Ronald often has projects going on outside that makes the whole neighborhood look like it's under construction, which really irritates you. No one else is outside. As you think about this, you decide to approach Ronald and

- a. slap him.
- b. hit him with a baseball bat lying nearby.
- A. Ronald looks at you with a confused expression and asks why you slapped him. You respond by
- c. clapping him on the shoulder, saying you have been stressed with long work hours lately and are sorry for taking that out on him.
- d. taking out a knife and repeatedly stabbing Ronald.
- B. Ronald lies moaning on the ground looking very bruised and bloodied. You respond by then
- e. admitting you weren't thinking straight and running to find a doctor for medical attention. You apologize profusely and want to make things right.
- F. taking out a gun and shooting Ronald fifteen times.

## **S2. Rating categories and distribution of added free-response endings**

We used 13 criteria below to rank the free-response endings and received the following results.

As indicated, we grouped the 13 criteria into 3 categories, with category I: Continuation or approval of violence; category II: Conciliation and apology; category III: Ending with evasion and other endings without further violence or apologies.

<b>Ending type</b>	<b>LL</b>	<b>VL</b>	<b>LV</b>	<b>VV</b>
1 Escalation of violence	<b>39</b>	<b>3</b>	<b>8</b>	<b>37</b>
2 Apology	<b>116</b>	<b>27</b>	<b>10</b>	<b>0</b>
3 Punishment	<b>17</b>	<b>8</b>	<b>0</b>	<b>8</b>
4 Counseling	<b>6</b>	<b>1</b>	<b>0</b>	<b>1</b>
5 "All a dream"	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>
6 Obedience to orders	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
7 "Got away with it"	<b>16</b>	<b>10</b>	<b>0</b>	<b>7</b>
8 Justice	<b>14</b>	<b>1</b>	<b>0</b>	<b>5</b>
9 Aggressor regrets	<b>15</b>	<b>2</b>	<b>0</b>	<b>3</b>
10 Aggressor does not regret	<b>29</b>	<b>4</b>	<b>2</b>	<b>11</b>
11 other	<b>14</b>	<b>2</b>	<b>0</b>	<b>1</b>

12 No apologies or further violence	<b>40</b>	<b>4</b>	<b>2</b>	<b>0</b>
13 Making threats	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>
Category I (1 ,7, 8, 10, 13) (more violence)	<b>85</b>	<b>19</b>	<b>12</b>	<b>63</b>
Category II (2, 4, 9) (reconciliations)	<b>152</b>	<b>31</b>	<b>6</b>	<b>3</b>
Category III (3, 5, 6, 11, 12) (evasions)	<b>79</b>	<b>15</b>	<b>4</b>	<b>11</b>