

# When Media Violence Awakens our Better Nature: The Effect of Unpleasant Violence on Reactivity toward and Enjoyment of Media Violence

**T. Franklin Waddell, Erica Bailey, Marcela Weber, James D. Ivory, and Edward Downs**

*The effects of violent media on aggression-related outcomes is an ongoing debate, often focusing on the effects of violence portrayals that are sanitized for the viewer. However, narratives that focus on the real world consequences of violence are also known to receive critical acclaim and broad exposure. Do unpleasant portrayals of violence affect viewers' subsequent reactivity to violence? Results from two laboratory studies show that priorexposure to unpleasant violence increases donation behavior to assist victims of real world violence (N = 60) and decreases enjoyment of fictional media violence (N = 109). The implications of these findings are discussed.*

A long tradition of research has examined the effects of media violence on desensitization to real world violence. Desensitization is theorized to encompass a variety of outcomes including lower sympathy for victims of violence, a lower willingness to help victims of violence, decreased physiological arousal when

---

**T. Franklin Waddell** (Ph.D., Pennsylvania State University) is an Assistant Professor in the College of Journalism and Communications at the University of Florida. His research interests are at the intersection of new technology and online storytelling including work related to automated news, the psychology of online comments, and the effects of social television.

**Erica Bailey**, (Ph.D. Pennsylvania State University) is an Assistant Professor of Communication at Angelo State University. Her research interests include media effects and new media technology.

**Marcela C. Weber**, MA, is a student of Clinical Psychology at the University of Mississippi. Her research interests include violence and trauma from a positive psychology perspective.

**James D. Ivory** (Ph.D., Mass Communication, University of North Carolina at Chapel Hill) is a professor in the Department of Communication at Virginia Polytechnic Institute (a.k.a. Virginia Tech). His primary research interests deal with social and psychological dimensions of digital media and communication technologies.

**Edward Downs** (Ph.D., Pennsylvania State University) is an associate professor at University of Minnesota Duluth. His published research examines relationships between technology and learning, the psychology of the individual-avatar relationship in digital environments, and how simulation experiences influence attitude and behavior changes.

viewing real world violence, and heightened enjoyment of media that feature violent acts (e.g., Funk, Baldacci, Pasold, & Baumgardner, 2004; Scharrer, 2008).

Desensitization is associated with exposure to a specific type of media violence, namely, violence that is trivialized through the omission of consequences and/or morally justified by the context of the narrative. Gerbner defines this trend in content as “happy violence,” or portrayals of violence in media that are “cool, swift, painless, and always lead to a happy ending” (1999, p. 13). While the happy violence described by Gerbner (1999) is still common, it should be noted that today’s media landscape also features programs with violence that lacks consistent sanitation or justification. For example, many award-winning films and documentaries focus on violence-related issues that affect thousands of people on an annual basis (Bartsch & Mares, 2014). In contrast to the “happy violence” described by Gerbner, these acts of “unpleasant” violence realistically depict the repugnance and grim consequences of violence for individuals and society. Rather than desensitizing viewers, unpleasant portrayals of violence are created by directors and producers to move audiences toward action (e.g., Ajaka, 2015).

There are several distinguishing features of unpleasant violence. First, unpleasant violence often deals with victims or acts of violence that are underrepresented in popular media. Second, these types of unpleasant violence are generally absent in popular media because they are not “happy endings produced on the television dramatic assembly line” (Gerbner, 1992, p. 13) to facilitate enjoyment. This leads to a third trait of unpleasant violence: it often lacks moral justification. Consider the example of domestic assault against women in media. Domestic violence is unpleasant to view in part because viewers have no way to suspend their morality because the victim is sympathetic (rather than dehumanized) and the consequences of violence are often shown realistically (rather than sanitized). Put another way, unpleasant violence is not trivialized or justified (e.g., dehumanization, sanitation, justification; Bandura, 1990), thus leading to lower enjoyment of the programming. Although these realistic “unpleasant” portrayals of violence are outnumbered by the “happy” violence portrayals that Gerbner describes, they are often critically praised and quite memorable for the vividness of the violence they depict (Bartsch & Mares, 2014).

Unpleasant violence is not likely to have the desensitizing effects that are traditionally associated with “happy” media violence. On the contrary, unpleasant violence that portrays violent behavior in an unadulterated form might actually heighten viewers’ reactivity to subsequent violent acts. This possibility would hold practical utility for interventions designed to heighten sensitivity to real-world violence and would also complement existing theoretical approaches to media violence. To that end, the effect of unpleasant violence on desensitization was tested with two experiments. Study 1 tested the effect of unpleasant violence on reactivity to real world violence, whereas Study 2 examined the effect of unpleasant violence on enjoyment of fictional violence. In both cases, unpleasant violence is compared to a no exposure control, per the methodological tradition in media violence research.

## “Happy” Media Violence and Desensitization

Violence in popular media often follows a predictable pattern: (1) it is justified by a moral cause; (2) sanctioned by the approval of others; (3) committed against dehumanized foes; and/or (4) sanitized by omitting the consequences of violence (e.g., Hartmann, Krakowiak, & Tsay-Vogel, 2014). Violent media include these narrative features to allow viewers to enjoy programming that includes violent acts without the typical reactivity caused by exposure to violence in non-mediated settings. Unfortunately, moral disengagement is theorized to do more than simply facilitate an enjoyable media experience; it may also foster emotional, physiological, or behavioral desensitization to violence in media and real life. Multiple studies have tested the possibility of media-induced desensitization among television viewers (e.g., Linz, Donnerstein, & Penrod, 1984; Scharer, 2008), film attendees (Bushman & Anderson, 2009), and video game players (e.g., Rothmund, Gollwitzer, & Klimmt, 2011). Some experimental evidence suggests that repeated exposure to media violence heightens desensitization (e.g., Linz et al., 1984), while other work has failed to show evidence of desensitization (e.g., Gao et al., 2017; Ramos, Ferguson, Frailing, & Romero-Ramirez, 2013).

Although many types of media violence often trivialize the consequences of violent behavior, sometimes violent media put a spotlight on the real-world consequences of violence for victims who are otherwise not represented in the “happy” media violence that typically saturates television sets and theaters. These films, television programs, and documentaries that present violence as it occurs in everyday life might be described as examples of “unpleasant violence.” As a genre, unpleasant violence is distinct from the “happy” violence initially advanced by Gerbner (1999). Some instances of media violence are unpleasant because they lack moral justification and vividly display the true consequences of violence in a realistic, natural context. Put another way, unpleasant violence refers to portrayals of violence that simultaneously lack justification (Hartmann & Vorderer, 2010), sanitation (Weaver & Wilson, 2009), and dehumanization (Lin, 2011). Sympathy for the victims of violence in media would thus be expected to vary as a function of unpleasant violence – when violence is not sanitized, lacks justification, or humanizes the victim – it is more likely to elicit sympathy as a result.

With that said, it should be noted that multiple moral emotions are likely under consideration when exposed to violence in media. Moral foundation theory (Graham, Haidt, Koleva, & Ditto, 2013) explains that justice and care are both moral concerns that can inform how we evaluate behavior. In the case of pleasant violence, moral foundation theory might suggest that justice salience would be high while care salience would be low because the context provided by the narrative justifies the violent act. By comparison, unpleasant violence would be characterized by a high level of both justice and care salience, as care is targeted toward the victim and justice is targeted toward the perpetrator. The critical distinction thus becomes that the moral evaluation of care is rendered toward the victim when

violence is unpleasant. When violence is pleasant, moral reasoning is not absent but instead re-directed toward justice rather than care.

If violence is portrayed in a more realistic way or moral justification is not provided by a narrative, unpleasant violence is expected to elicit lower levels of enjoyment. This is consistent with Bandura's (1990) moral disengagement approach, which has subsequently been applied by scholars with traditional and digital media (e.g., Hartmann et al., 2014). For example, a classic study (Zillman & Bryant, 1975) examined the effect of punishment severity on narrative enjoyment among adolescents who varied in their development of moral reasoning. Results revealed that enjoyment depended on the match between adolescents' expectations of appropriate punishment and the magnitude of the punishment administered to the character in the narrative. More severe punishment decreased enjoyment among adolescents who were more mature in their moral reasoning (and thus expected punishment to match the severity of the offense), while severe punishment was most appreciated by younger adolescents who expected strong punishment for any offense. Building on this logic, recent studies have found that enjoyment of media is affected by factors that influence the ability to morally disengage (e.g., Grizzard, Tamborini, Lewis, Lu, & Sujay, 2014), although interestingly this pattern of results can vary based on whether the response in question is related to enjoyment or appreciation (Grizzard, Fitzgerald, Ahn, & Lewis, 2018). Taken as a whole, available evidence suggests that media violence is less enjoyable when the violence is unpleasant. More formally, the following hypothesis is proposed, which is tested in Study 1:

H1: A media portrayal of unpleasant violence will elicit lower levels of enjoyment than a nonviolent media portrayal.

## **“Unpleasant” Violence and Reactivity to Real World Violence**

As described before, some scholars have hypothesized that frequent exposure to media violence has the potential to desensitize viewers' subsequent responses to real world violence (e.g., Funk et al., 2004; Scharrer, 2008), although this view is not held universally (e.g., Elson & Ferguson, 2014). The effects of violent media on desensitization has often been explained from the perspective of the general aggression model (GAM; Bushman & Anderson, 2009), which hypothesizes that external stimuli (like media violence) can affect aggression-related outcomes through activating distinct psychological inputs (like physiological arousal). With that said, the GAM acknowledges that not all types of media violence are likely to reduce reactivity to violent acts. Violent media are predicted to have desensitizing effects in part because the violence that appears in traditional “happy” violence is often trivialized, distorted or justified by the narrative.

What happens, however, when the consequences of violence are highlighted rather than minimized? If moral disengagement is theorized to promote desensitization, is it possible for the reverse effect to occur when the violence is framed in the narrative as morally reprehensible? Work examining prosocial media provides some tentative support for this possibility. Viewing others engaged in acts of charity can heighten individuals' subsequent intention to help others (e.g., Schnall & Roper, 2012) or reduce the pleasantness of viewing media violence (e.g., Waddell, Bailey, & Davis, 2017), possibly due in part to the increased salience of relevant moral emotions (e.g., Eden et al., 2014). Following this theoretical warrant, unpleasant violence may operate through similar mechanisms by increasing the salience of violence as an abhorrent, immoral act, thus increasing reactance to violence and the willingness to help victims of violence. More formally, the following hypotheses are proposed, which are tested in Study 1:

H2: A media portrayal of unpleasant violence will lead to lower levels of self-reported sympathy for victims of violence than a nonviolent media portrayal.

H3: A media portrayal of unpleasant violence will lead to lower levels of physiological desensitization than a nonviolent media portrayal.

H4: A media portrayal of unpleasant violence will increase willingness to help victims of violence.

## **“Unpleasant” Violence and Reactivity to Fictional Violence**

As mentioned previously, enjoyment of media violence is facilitated by narrative features that sanitize and/or justify violence. Scholars highlight that viewers' enjoyment of media violence can foster the development of reinforcing spirals between exposure, possible effects, and subsequent preference for the content that generated the effect (e.g., Slater, 2007). Given this prospective link between enjoyment and effects, there is a theoretical and practical interest in identifying possible factors that influence the enjoyment of media violence.

In the case of the current study, we ask whether prior exposure to unpleasant violence has potential as an intervention tool for decreasing the pleasure of viewing trivialized violent acts in popular media. This hypothesis is grounded on the assumption that prior exposure to violent media that displays the consequences of violence will activate rather than suppress viewers' moral sensitivity to violence. Such an effect does not suggest that a single exposure to unpleasant violence would be expected to have an effect on violence-related outcomes that are theorized to develop over time through repeated exposure. However, unpleasant violence may have a short-term effect that is driven by the increased accessibility of moral

concerns. Put simply, prior exposure to unpleasant media violence that realistically portrays the consequences of violence may reduce viewers' ability to enjoy viewing other portrayals of violence, even if those acts of violence are sanitized by moral disengagement cues that typically minimize moral responses to media violence. Thus, the following hypothesis is proposed, which is tested in Study 2:

H5: Prior exposure to a media portrayal of unpleasant violence (relative to a nonviolent media portrayal) will decrease subsequent enjoyment of fictional violence.

## Study 1

A one-factor (violence portrayal), three-condition (pleasant violence, unpleasant violence, and no violence/control) between-subjects laboratory experiment was conducted. Participants were 60 students, staff, and faculty at a large research university (60% female) recruited to participate in exchange for a ten-dollar cash payment. They reported a mean age of 22.63 years (Median = 21, Range = 17–40,  $SD = 5.03$ ). When asked to self-report their race, 56.67% ( $N = 34$ ) reported White/Caucasian, 13.33% ( $N = 8$ ) reported Asian/Asian American, 13.33% ( $N = 8$ ) reported bi- or multi-racial, 11.67% ( $N = 7$ ) reported Black/African American, 3.33% ( $N = 2$ ) reported Hispanic/Latino/Latina, and 1.67% reported "Iranian" ( $N = 1$ ).

### Stimulus Materials

Participants were randomly assigned to watch one of three five-minute clips from the 1994 New Zealand film *Once Were Warriors*, which won several international film awards and became the highest-grossing film ever in New Zealand at the time of its regular exhibition (Scholes & Tamahori, 1994). The clips, which were edited in such a manner as to provide brief vignettes that could largely be interpreted without the broader context of the film, portrayed three scenarios featuring the same main characters from the film. All three versions of the clip showed a brief opening credits scene introducing the film and its main characters, but the remainder of the three clips varied accordingly to operationalize the degree to which the viewing experience was unpleasant.

In the clip shown for the "pleasant violence" condition, lead character Jake Heke is drinking with his wife Beth and friends at a bar while a friend sings on the microphone. A burly young ex-convict enters the bar, starts a fight with two patrons and beats them up, then interrupts the song Jake's friend is singing by starting up a jukebox. Jake approaches and provokes the interloper, bests him in a fight, and

the friend's song continues with the approval of much of the crowd. The clip ends with order restored at the bar thanks to Jake's infamous pugilistic talents.

In the clip shown for the "unpleasant violence" condition, Jake Heke and his wife Beth are hosting an after-hours party at their home when Beth refuses to make eggs for a friend of Jake's. When Jake insists, Beth again refuses angrily and objects to the way she is treated, prompting Jake to beat her savagely as the party's guests flee without offering aid to Beth. The clip ends with Beth gingerly assessing the wounds on her grotesquely swollen face after the abuse.

In the clip shown for the "no violence" control condition, Jake Heke and his wife Beth are hosting an after-hours party at their home (the same after-hours party featured in the clip for the unpleasant violence condition, but at an earlier point and with no overlapping shots), with Jake and Beth taking turns singing along to a guitar played by a party guest. Jake and Beth take turns signing lines from the love song to each other, with the crowd of guests joining in as a chorus. The clip ends with the guests cheering the performance and Jake and Beth sharing a kiss. This scene was selected for purposes of comparison as a clip that did not feature violence but was similar to the other clips used in other relevant features (e.g., degree of interest, type of characters, and scene).

*Attitude and Behavior Object Clip: Syrian Conflict Victims.* In addition to the manipulated clip from *Once Were Warriors*, participants later watched a three-minute clip from a 2012 television news broadcast with voiced-over reporting and footage of a field hospital housing victims of the ongoing Syrian conflict, including footage of severely injured adults, children, and the covered bodies of fatalities. Other footage interspersed with the voice-over included footage from diplomatic events and speeches. All participants viewed the news clip of the Syrian conflict, so that responses to the clip could be measured to assess the potential effects of the earlier violence portrayal manipulation.

## Outcome Measures

*Film Clip Enjoyment.* Enjoyment of the film clip was assessed with an index of 16 Likert-type (1 = "Strongly Disagree," 7 = "Strongly Agree") items adapted from Krakowiak and Oliver (2012). Sample items included "I enjoyed watching the film clip," "I liked the film clip," and "I had a good time watching the film clip." While the original scale was assumed to reflect cognitive, affective, and behavioral dimensions of enjoyment, cross-loadings across factors prevented extraction of multiple factors as planned, even after cross-loading items were removed. As a result, the sixteen items were combined to form a single index (Cronbach's  $\alpha = .84$ ;  $M = 3.49$ ,  $SD = .90$ ).

*Sympathy toward Film Clip Characters.* Sympathy toward the characters in the manipulated *Once Were Warriors* film clip was assessed with an index of four

Likert-type (1 = "Strongly Disagree," 7 = "Strongly Agree") items adapted from prior research (Ward, 1988; Cronbach's  $\alpha = .94$ ;  $M = 3.74$ ,  $SD = 2.00$ ). Sample items included, "I felt sorry for the characters I saw," "I felt sympathy for characters I saw because they appeared to be in physical pain," and "I felt sympathy for the characters I saw because they appeared to suffer emotionally." Sympathy items did not pertain to a specific character in the scene to avoid the possibility that viewers did not recall the name of the character from the plot; other descriptors, such as asking characters about their sympathy toward the victim of domestic assault, were also avoided to minimize social desirability bias.

*Sympathy toward News Clip Subjects.* Sympathy toward the Syrian conflict victims in the news clip shown to all participants was assessed with an index of four Likert-type (1 = "Strongly Disagree," 7 = "Strongly Agree") items also adapted from Ward (1988), but with different wording to indicate the people in the news clip rather than the characters in the film (Cronbach's  $\alpha = .80$ ;  $M = 6.51$ ;  $SD = .57$ ).

*Donation Intention Toward Violence Victims.* Past studies have measured sympathy with behavioral measures related to helping others such as the time that expires between hearing the sound of a fight and responding with assistance or the likelihood of helping someone who has fallen from crutches (e.g., Bushman & Anderson, 2009). Consistent with this trend of focusing on behavioral measures related to the intention to help others, a single survey item asked participants if they would be willing to donate a dollar or more from their ten dollar participant compensation to the Red Cross to be used to support victims of the conflict in Syria, with a response item allowing them to choose "yes" or "no" (55% "no"). Although a dichotomous measure of helping behavior has possible limitations in terms of validity and prospective variability given its limited range, it was nonetheless expected that more frequent donations would serve as an additional measure of sympathy that would complement the continuous sympathy measures at the self-report and physiological levels.

*Physiological Desensitization: Heart Rate.* Heart rate (HR), an indicator of physiological arousal typically associated with emotional stress or increased attention (Ravaja, 2004), which has been used in prior research to measure physiological desensitization to violence (e.g., Carnagey, Anderson, & Bushman, 2007), was assessed as a tonic measure while participants viewed the news clip featuring Syrian conflict victims. Data were sampled 200 times per second at a sampling rate of 66.5 Hz using a BIOPAC MP35 system during two time periods. The first HR measurement was a baseline measure taken for a period of 30 seconds before participants viewed the news clip. Second, tonic HR was measured continuously during the three-minute news clip. HR for the news clip was then calculated as the percentage change in HR between the baseline measurement and the subsequent news clip (specifically calculated by subtracting



the mean baseline HR from the mean news clip HR, then dividing by the mean baseline HR).

*Physiological Desensitization: Skin Conductance.* Continuous skin conductance level (SCL) was collected while participants viewed the news clip featuring Syrian conflict victims. SCL is a tonic measure of sympathetic nervous system activity indicating physiological arousal (Dawson, Schell, & Filion, 2000) that has also been used in previous media violence research to measure physiological desensitization (Carnagey et al., 2007). Data were sampled 200 times per second at a sampling rate of 66.5 Hz using a BIOPAC MP35 system during two time periods. The first skin conductance measurement was a baseline measure taken for a period of 30 seconds before participants viewed the news clip. Second, SCL was measured continuously during the three-minute film clip. Physiological arousal for the news clip was then calculated as the percentage change in SCL between the baseline measurement and the subsequent news clip (specifically calculated by subtracting the mean baseline SCL from the mean news clip SCL, then dividing by the mean baseline SCL).

## Procedure

All participants took part in the experiment in individual sessions. After participants signed an informed consent form, they were seated in an office-style armchair. Participants then completed a questionnaire containing the age, sex, and race measures for descriptive purposes. The experiment administrator then applied electrode jelly to the contact areas of the electrodes and attached disposable adhesive Ag-AgCl electrodes with 10 mm contact area to the participant at both ankles, the inside of the right forearm, and the distal phalanges of the index and middle fingers on the non-dominant hand for heart rate and skin conductance measures.

The experimenter showed one of the three five-minute *Once Were Warriors* clips as determined by a randomization sheet. After the clip, participants completed a questionnaire including the film enjoyment and sympathy for film characters measures. Before proceeding to the real-world violence attitude object, the experimenter collected baseline measure for physiological arousal. Participants then viewed the three-minute news clip featuring the Syrian conflict victims, while HR and SCL measurements were collected for the duration of the news clip. Immediately afterward, participants completed the final questionnaire, including the sympathy for news clip subjects measure and the donation intention measure. While participants were led to believe that during the study they would be given the opportunity to donate a portion of their compensation to charity, it was revealed in debriefing that participants would receive the full 10-dollar payment for participating in the study regardless how they responded to the donation question; the cost of donations volunteered by participants was absorbed by the researchers and made on behalf of participants.

## Results

### Sympathy for Film Characters

It was expected that sympathy for fictional victims of violence would be greater among those viewing an unpleasant violence portrayal. To test this possibility, a one-way ANOVA was conducted with violence presentation condition as the independent variable and the sympathy for film characters index as the dependent measure, which found a significant effect of violence presentation,  $F(2, 57) = 82.95$ ,  $p < .001$ ,  $\eta_p^2 = .74$ . Post-hoc comparisons using the Sidak correction found that film character sympathy index scores were significantly higher in the unpleasant violence condition ( $M = 6.15$ ,  $SE = .23$ ) than in the control condition ( $M = 2.35$ ,  $SE = .23$ ),  $p < .001$ , while film character sympathy index scores were not significantly different between the control condition and the pleasant violence condition ( $M = 2.72$ ,  $SE = .23$ ),  $p > .05$ . The contrast between the unpleasant and pleasant violence conditions was also statistically significant,  $p < .001$ .

### Enjoyment of Media Violence

It was also expected that enjoyment of media violence would be lower among those viewers exposed to an unpleasant violence portrayal, as predicted by H1. To test this possibility, a one-way analysis of variance (ANOVA) with the violence presentation condition as the independent variable and the film clip enjoyment index as the dependent measure was conducted, which found a significant effect of violence presentation,  $F(2, 57) = 8.76$ ,  $p < .001$ ,  $\eta_p^2 = .24$ . Post-hoc comparisons using the Sidak correction found that enjoyment index scores were lower in the unpleasant violence condition ( $M = 2.97$ ,  $SE = .18$ ) than the control condition ( $M = 4.03$ ,  $SE = .18$ ;  $p < .001$ ), while the difference between the control condition and the pleasant violence condition ( $M = 3.48$ ,  $SE = .85$ ) was not significant,  $p > .05$ . The difference between the pleasant violence and unpleasant violence condition was also not statistically significant,  $p > .05$ . H1 was supported.

### Sympathy for News Subjects

H2 predicted that sympathy for victims of violence depicted in the news clip would be higher in the unpleasant violence condition than the nonviolent control condition. A similar ANOVA with violence presentation condition as the independent variable and the sympathy for news subjects index as the dependent measure found no significant effect of violence presentation,  $F(2, 57) = .56$ ,  $p = .57$ ,  $\eta_p^2 = .02$ . H2 was not supported.

### Physiological Indicators of Desensitization: Heart Rate

H3 asked whether exposure to pleasant or unpleasant portrayals of violence affect individuals' physiological arousal while viewing real life, news media portrayals of media violence. A one-way analysis of variance (ANOVA) with violence presentation as the independent variable and heart rate during the news clip as the dependent measure found no significant effect of violence presentation,  $F(2, 57) = 1.30, p = .28, \eta_p^2 = .04$ .

### Physiological Indicators of Desensitization: Skin Conductance

To further test H3, a one-way analysis of variance (ANOVA) test with violence presentation condition as the independent variable and skin conductance during news clip as the dependent measure found no significant effect of violence presentation,  $F(2, 57) = .76, p = .47, \eta_p^2 = .03$ . In sum, H3 was not supported for either indicator of physiological arousal.

### Donation Intention for Violence Victims

H4 predicted that donations to help victims of violence would be higher in the unpleasant violence condition than the nonviolent control condition. A chi-square test using the nominal logistic regression approach with violence presentation condition as the independent variable and donation behavior as the dependent measure found a significant effect of violence presentation,  $\chi^2(2, N = 60) = 6.47, p = .04$ , Generalized  $R^2 = .14$ . Parameter estimates and odds ratios indicate that donation rates were significantly higher for the unpleasant violence condition (65.00%,  $N = 13$ ) than for the no violence control condition (25.00%,  $N = 5$ ),  $p < .05$ , while the difference between donation rates for the pleasant violence condition (45.00%,  $N = 9$ ) and the no violence/control condition was not statistically significant,  $p > .05$ . The difference between the pleasant violence and unpleasant violence condition was also not statistically significant,  $p > .05$ .

## Discussion, Study 1

The results of Study 1 found that unpleasant violence was less enjoyable to view relative to the control condition. Furthermore, feelings of sympathy toward fictional victims of violence were higher in the unpleasant violence condition than the control condition. As for desensitization, donations to help victims of violence were more common after viewing unpleasant violence. With that said, no effect of unpleasant violence was detected for self-reported sympathy toward real world victims or physiological indicators of violence reactance.

These results from Study 1 should be considered in light of several possible limitations. The effect of unpleasant violence on donation frequency was directionally consistent with our a priori expectation, but the effects that were not detected could be too small to observe with the relatively small sample that was employed, thus increasing the possibility of type II error. Study 1 also focused exclusively on reactivity to real world acts of violence, which does not account for the possibility that unpleasant violence could impact other types of violence as well, such as fictional violence. A second study thus provides multiple opportunities: (1) to conduct a study with a larger sample, (2) to examine the effect of unpleasant violence on enjoyment of fictional violence, and (3) to assess the effects of unpleasant violence across a second population of respondents. To that end, a follow-up experiment was conducted that examined how exposure to unpleasant violence affects the subsequent processing of fictional violent media.

## Study 2

A similar one factor, three condition (pleasant vs. unpleasant vs. no violence control) experiment was conducted where participants viewed one of three possible media violence clips, then afterward were exposed to a “pleasant” media violence clip that served as the attitude object for the study. One-hundred and nine undergraduate students enrolled in Communication courses participated in the study in exchange for course credit. The average age of participants was 19.72 years ( $SD = 1.45$ ) and the gender distribution was relatively equal (52% female).

### Stimulus Materials

The same clips used in Study 1 were again employed to operationalize the violence presentation conditions. As for the media violence attitude object, the effects of desensitization investigated in Study 1 were tested with responses to fictional media violence in Study 2 using a nine-minute clip from the beginning of the film, *Kill Bill: Volume 1* (Bender & Tarantino, 2003). The scene features violence between two women participating in a range of quick violent acts including kicking, punching, and the use of weapons. The scene ends with the main protagonist killing the antagonist by throwing a knife that pierces the antagonist’s chest.

### Dependent Variables

*Enjoyment.* Participants rated their enjoyment of the *Kill Bill* video clip with a 16-item index adapted from Krakowiak and Oliver (2012) measured on a seven point scale. The items again did not load on multiple factors as expected due to cross-loadings and were therefore combined to form a single index (Cronbach’s  $\alpha = .96$ ;  $M = 3.91$ ,  $SD = 1.46$ ).

## Other Measures

On the last page of the questionnaire, participants' age and gender were also collected for compiling descriptive statistics.

## Procedure

Participants took part in the study in groups of up to 20 people. They were greeted and asked to sign an informed consent form before the experiment began. Participants sat at individual desktop computers and watched the first video stimulus (*Once Were Warriors*) on a 50-inch screen displayed by a projector at the front of the room, with viewing distance varying between three to four feet from the screen. Then, participants watched the second video stimulus (*Kill Bill*), then completed measures of enjoyment. Upon completion, participants signed an attendance sheet and were dismissed.

## Results

### Enjoyment

H5 predicted that enjoyment of fictional media violence would be lower in the unpleasant violence condition than the nonviolent control condition. A one-way ANOVA with violence presentation as the independent variable and subsequent enjoyment of media violence as the dependent variable was significant,  $F(2,106) = 4.66$ ,  $p = .01$ ,  $\eta_p^2 = .08$ . As expected, post-hoc comparisons using the Sidak correction revealed that the contrast between the unpleasant violence condition ( $M = 3.56$ ,  $SE = .23$ ) and the no-violence control ( $M = 4.53$ ,  $SE = .25$ ) was statistically significant,  $p = .02$ . By comparison, the contrast between the pleasant violence condition ( $M = 3.72$ ,  $SE = .23$ ) and the no-violence control was non-significant,  $p = .05$ . The difference between the pleasant violence and unpleasant violence condition was also not statistically significant. Given this pattern of results, H5 was supported.

## General Discussion

Two studies examined the effect of "unpleasant violence" on reactivity to world violence (Study 1) and enjoyment of fictional violence (Study 2). Our results found that unpleasant monetary donations to victims of violence were more common after viewing unpleasant violence in Study 1 and that media violence was less enjoyable to view after exposure to unpleasant violence in Study 2. These results provide further nuance to the

existing literature on media violence effects by showing that realistic portrayals of violence that lack moral justification may increase subsequent reactivity to real-world violence or decrease enjoyment of fictional violence. Given these findings, the distinction between “pleasant” and “unpleasant” violence appears to be a theoretically useful conceptualization for scholars who study the effects of violent media.

Study 1 offered support for the prediction that unpleasant violence is less enjoyable to view, presumably due to the absence of narrative features that sanitize or provide justification for the violent acts that are portrayed. This finding is consistent with early studies on evaluations of moral retribution based on perceptions of equitability (Zillman & Bryant, 1975) as well as more recent work on how moral disengagement impacts enjoyment of digital media. With that said, some evidence does not entirely align with the present work. For example, a recent study (Grizzard et al., 2018) examined how enjoyment and the perceived meaningfulness of a textual narrative varies based on the equity between the transgression committed and the punishment administered. Results from that study revealed that narratives with either equitable or severe acts of retribution were more enjoyable than narratives that featured mild retribution. By comparison, perceptions of meaningfulness were greatest when the transgression was punished mildly rather than equitably.

In the present study, enjoyment was lowest when aggression was not morally justified, which is perhaps most similar to the severe retribution condition from Grizzard et al. (2018) given that both forms of retribution exceeded the punishment that would be expected. One difference between the two studies is that the unpleasant violence in the present work may not have been perceived by subjects as a form of retribution at all, given that the extreme violence committed by the perpetrator was relatively unprovoked by the victim. There are also several idiosyncratic differences between the two studies, such as the modality of the narrative (textual vs visual) and the nature of the design (between vs within subjects). In either case, it would be valuable for future research to consider both patterns of results, perhaps by probing the effects of over-retribution that vary in perceived severity.

The primary purpose of the present study was to measure reactivity to fictional and real world portrayals of violence. In Study 1, reactivity to real world violence was measured along three dimensions: (1) physiological arousal during exposure to real world violence, (2) self-reported sympathy for victims of real world violence, and (3) willingness to donate money to victims of violence. While the influence of unpleasant violence on donation behavior was significant, no effect was detected for either physiological reactivity or self-reported sympathy. Responses on the self-reported sympathy measure could be a function of socially desirable responding, or it could be that sympathy was generally quite high for regardless of condition. Similar ceiling effects are also likely for the physiological measures, given the particularly graphic nature of the stimulus. Interestingly, the observation of effects with the donation measure suggests a possible boundary condition for measuring sympathetic responding, such that the required commitment to provide a socially

desirable response can be outweighed by the sacrifice necessary to do so (in this case, the donation of money).

Aside from concerns related to measurement, it may be possible that a short five minute exposure to unpleasant violence is not adequate to alter viewers' physiological reactivity to real world violence, or because the tonic nature of the SCL measure masked a phasic spike in the amplitude of the response. More conservatively, it could be that unpleasant violence has an effect on physiological arousal that is too small to be detected at the level of statistical power afforded by the sample size of study 1. In general, the average number of participants per cell was low in Study 1 and slightly greater (but still low) in Study 2. Sample size is variable in communication science as a field (Elson & Przybylski, 2017), but in general a larger sample determined based on an anticipated effect size is needed for future work. With this in mind, it would be useful for future studies to replicate the results of Study 1 with a larger sample while employing measures for self-reported sympathy that are less likely to be susceptible to social desirability bias.

In Study 2, the effect of unpleasant violence on subsequent reactivity to fictional violence was tested. Results revealed that enjoyment of the fictional violence clip was lower when preceded by exposure to the unpleasant violence treatment relative to when the same clip was viewed without prior exposure to media violence. While this effect was consistent with our expectations, it was relatively surprising to see that enjoyment scores were also lower than control among subjects in the pleasant violence condition. This contrast between pleasant violence and control conditions is just a trend (given the non-significance of the pairwise contrast), but the pattern nonetheless raises the possibility that enjoyment is dampened by repeated exposure to the same content, rather than due to the inhibition of moral concerns caused by exposure to an unpleasant violence portrayal. Future work could address this competing alternative explanation by measuring moral disengagement and perceived redundancy as prospective theoretical pathways for the effect of unpleasant and pleasant violence, respectively.

Finally, the results of Study 1 and Study 2 were both based on depictions of pleasant and unpleasant violence from a single media exemplar. One message designs have inherent limitations, such as the possibility that idiosyncratic features of the message are responsible for the effects observed, rather than the manipulated difference between conditions. For example, our findings may be an effect associated with exposure to domestic abuse, rather than one that is generalizable to any form of violence that lacks sanitation or moral justification. With that said, it is unclear why only domestic abuse would generate donation behavior but other forms of unpleasant violence would not, particularly if both shared common qualities such as a sympathetic victim or the lack of moral justification. At a minimum, a compelling theoretical reason is needed to justify stimulus sampling given the increased statistical power necessary to detect a possible manipulation by media exemplar interaction. This operational choice does not inherently diminish the contribution of the study, but does call attention to the

need for future work to replicate our results with other types of violence that would constitute an unpleasant portrayal. In short, the present work offers an initial demonstration of a media effect in a specific experimental context, just as prior studies before it have also been conducted with single message designs.

## Limitations and Future Research

In terms of methodological considerations, we manipulated unpleasant violence by removing all features that typically accompany pleasant violence, which is consistent with our conceptualization of the unpleasant violence genre. This operational choice has ecological validity because moral disengagement features tend to co-occur rather than selectively appear in isolation (Hartmann et al., 2014). However, it should be noted that this operational choice comes with limitations, such as the presence of multiple differences between conditions (e.g., sanitized, justified, dehumanized), which limits our ability to identify what specific element of the portrayal accounts for the effects of unpleasant violence relative to control. As a result, while our study was guided by a focus on the effects of the unpleasant genre overall, future research may wish to complement our findings by continuing to parse out the unique influence of characteristics that comprise a typical unpleasant violence portrayal, perhaps with physiological measures that are tonic in nature—to examine the specific variations in heart rate or skin conductance—which vary at the time in a scene, when unpleasant violence is committed. Finally, future studies should also consider measurements of sympathy that are targeted toward specific characters, rather than referring to sympathy toward the characters pictured in the scene overall, which will avoid the possibility for respondent confusion that could introduce noise to the data set.

## Conclusion

Taken as a whole, the findings of two studies have revealed the possible prosocial influence of unpleasant violence on donation behavior and enjoyment of media violence. Evidence suggests that unpleasant violence may have an inoculation effect that can foster prosocial behavior and reduce subsequent enjoyment of media violence. Given these findings, the occasional dose of unpleasant violence may be a possible mechanism for awakening viewers' better nature.

## Disclosure statement

No potential conflict of interest was reported by the authors.



## Funding

This material is based upon work supported by the National Science Foundation under Grant No. 1156624. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation (NSF).

## References

- Ajaka, N. (2015). Photographic domestic violence. *The Atlantic*. Retrieved from [www.theatlantic.com/video/index/419652/photographing-the-evolution-of-domestic-violence/?utm\\_source=SFTwitter](http://www.theatlantic.com/video/index/419652/photographing-the-evolution-of-domestic-violence/?utm_source=SFTwitter)
- Bandura, A. (1990). Mechanisms of moral disengagement. In W. Reich (Ed.), *Origins of terrorism: Psychologies, ideologies, theologies, states of mind* (pp. 161–191). Washington DC: Woodrow Wilson Center Press.
- Bartsch, A., & Mares, M.-L. (2014). Making sense of violence: Perceived meaningfulness as a predictor of audience interest in violent media content. *Journal of Communication*, 64(5), 956–976. doi:10.1111/jcom.12112
- Bender, L., & Tarantino, Q. (2003). *Kill bill: Volume 1* [Motion Picture]. United States: Miramax.
- Bushman, B. J., & Anderson, C. A. (2009). Comfortably numb: Desensitizing effects of violent media on helping others. *Psychological Science*, 20(3), 273–277. doi:10.1111/j.1467-9280.2009.02287.x
- Carnagey, N. L., Anderson, C. A., & Bushman, B. J. (2007). The effect of video game violence on physiological desensitization to real-life violence. *Journal of Experimental Social Psychology*, 43(3), 489–496. doi:10.1016/j.jesp.2006.05.003
- Dawson, M. E., Schell, A. M., & Filion, D. L. (2000). The electrodermal system. In J. T. Cacioppo, L. G. Tassinary, & G. L. Bernston (Eds.), *Handbook of psychophysiology* (pp. 200–223). New York, NY: Cambridge University Press.
- Eden, A., Tamborini, R., Grizzard, M., Lewis, R., Weber, R., & Prabhu, S. (2014). Repeated exposure to narrative entertainment and the salience of moral intuitions. *Journal of Communication*, 64(3), 501–520. doi:10.1111/jcom.12098
- Elson, M., & Ferguson, C. J. (2014). Twenty-five years of research on violence in digital games and aggression: Empirical evidence, perspectives, and a debate gone astray. *European Psychologist*, 19, 33–46. doi:10.1027/1016-9040/a000147
- Elson, M., & Przybylski, A. K. (2017). The science of technology and human behavior: Standards, old and new. *Journal of Media Psychology*, 29, 1–7. doi:10.1027/1864-1105/a000212
- Funk, J. B., Baldacci, H. B., Pasold, T., & Baumgardner, J. (2004). Violence exposure in real life, video games, television, movies and the internet: Is there desensitization? *Journal of Adolescence*, 27(1), 23–39. doi:10.1016/j.adolescence.2003.10.005
- Gao, X., Pan, W., Li, C., Weng, L., Yao, M., & Chen, A. (2017). Long-time exposure to violent video games does not show desensitization on empathy for pain: An fMRI study. *Frontiers in Psychology*, 8. doi:10.3389/fpsyg.2017.00650
- Gerbner, G. (1992). Violence and terror in and by media. In M. Raboy & B. Dagenais (eds.), *Media, crisis, and democracy* (pp. 94–107). London: SAGE.
- Gerbner, G. (1999). The stories we tell. *Peace Review*, 11(1), 9–16. doi:10.1080/10403659908426225
- Graham, J., Haidt, J., Koleva, S., & Ditto, P. H. (2013). Moral foundations theory: The pragmatic validity of moral pluralism. *Advances in Experimental Social Psychology*, 47, 55–130. doi:10.1016/B978-0-12-407236-7.00002-4

- Grizzard, M., Fitzgerald, K., Ahn, C., & Lewis, R. J. (2018, May). *Narrative retribution and cognitive processing*. Paper presented at the annual meeting of the International Communication Association, Prague, Czech Republic.
- Grizzard, M., Tamborini, R., Lewis, R. J., Lu, W., & Sujay, P. (2014). Being bad in a video game can make us morally sensitive. *Cyberpsychology, Behavior, and Social Networking*, 17(8), 499–504. doi:10.1089/cyber.2013.0658
- Hartmann, T., Krakowiak, K. M., & Tsay-Vogel, M. (2014). How violent video games communicate violence: A literature review and content analysis of moral disengagement factors. *Communication Monographs*, 81(3), 310–332. doi:10.1080/03637751.2014.922206
- Hartmann, T., & Vorderer, P. (2010). It's okay to shoot a character: Moral disengagement in violent video games. *Journal of Communication*, 60, 94–119. doi:10.1111/j.1460-2466.2009.01459.x
- Krakowiak, K. M., & Oliver, M. B. (2012). When good characters do bad things: Examining the effect of moral ambiguity on enjoyment. *Journal of Communication*, 62(1), 117–135. doi:10.1111/j.1460-2466.2011.01618.x
- Lin, S.-F. (2011). Effect of opponent type on moral emotions and responses to video game play. *Cyberpsychology, Behavior, and Social Networking*, 14(11), 695–698. doi:10.1089/cyber.2010.0523
- Linz, D., Donnerstein, E., & Penrod, S. (1984). The effects of multiple exposures to filmed violence against women. *Journal of Communication*, 34(3), 130–147. doi:10.1111/j.1460-2466.1984.tb02180.x
- Ramos, R. A., Ferguson, C. J., Frailing, K., & Romero-Ramirez, M. (2013). Comfortably numb or just yet another movie? Media violence exposure does not reduce viewer empathy for victims of real violence among primarily Hispanic viewers. *Psychology of Popular Media Culture*, 2(1), 2–10. doi:10.1037/a0030119
- Ravaja, N. (2004). Contributions of psychophysiology to media research: Review and recommendations. *Media Psychology*, 6(2), 193–235. doi:10.1207/s1532785xmep0602\_4
- Rothmund, T., Gollwitzer, M., & Klimmt, C. (2011). Of virtual victims and victimized virtues: Differential effects of experienced aggression in video games on social cooperation. *Personality and Social Psychology Bulletin*, 37(1), 107–119. doi:10.1177/0146167210391103
- Scharrer, E. (2008). Media exposure and sensitivity to violence in news reports: Evidence of desensitization? *Journalism & Mass Communication Quarterly*, 85(2), 291–310. doi:10.1177/107769900808500205
- Schnall, S., & Roper, J. (2012). Elevation puts moral values into action. *Social Psychological and Personality Science*, 3(3), 373–378. doi:10.1177/1948550611423595
- Scholes, R., & Tamahori, L. (1994). *Once were warriors* [Motion Picture]. New Zealand: Fine Line Features.
- Slater, M. B. (2007). Reinforcing spirals: The mutual influence of media selectivity and media effects and their impact on individual behavior and social identity. *Communication Theory*, 17(3), 281–303. doi:10.1468-2885.2007.00296.x
- Waddell, T. F., Bailey, E., & Davis, S. E. (2017). Does elevation reduce viewers' enjoyment of media violence? Testing the intervention potential of inspiring media. *Journal of Media Psychology*. doi:10.1027/1864-1105/a000214
- Ward, C. (1988). The attitudes toward rape victims scale: Construction, validation, and cross cultural applicability. *Psychology of Women Quarterly*, 12(2), 127–146. doi:10.1111/j.1471-6402.1988.tb00932.x
- Weaver, A. J., & Wilson, B. J. (2009). The role of graphic and sanitized violence in the enjoyment of television dramas. *Human Communication Research*, 35(3), 442–463. doi:10.1111/j.1468-2958.2009.01358.x
- Zillman, D., & Bryant, J. (1975). Viewer's moral sanction of retribution in the appreciation of dramatic presentations. *Journal of Experimental Social Psychology*, 11(6), 572–582. doi:10.1016/0022-1031(75)90008-6

Copyright of Journal of Broadcasting & Electronic Media is the property of Broadcast Education Association and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.