Chapter 9

COMIC BOOK VIOLENCE AND VENGEANCE

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ABSTRACT

This study investigated the effects of reading violent versus nonviolent comic books on vengeful responding to hypothetical scenarios. Results indicated that participants reading violent comic books were the most vengeful. Exposure to violent media may influence the likelihood of seeking revenge by activating or reinforcing an individual’s aggressive network.
Revenge involves retaliating against a perceived harm doer and unlike other forms of aggression, revenge is often perpetrated to “right” a perceived wrong, restore lost self worth resulting from a perceived wrong, and deter future wrong doings from occurring (Stuckless & Goranson, 1992; Cota-McKinley, Woody, & Bell, 2001). Emotions accompanying revenge include hatred and righteous anger (Kim & Smith, 1993). In part due to revenge based school shootings, revenge as a motivational factor for extreme violence has received increasing scientific scrutiny. For instance, Dedman (2000) reports that school shooters frequently cite being bullied and tormented by classmates as the primary reason for their heinous acts. Similarly, workplace violence, theft, and sabotage are associated with individuals experiencing some form of interpersonal injustice (e.g., being insulted, misrepresented or falsely accused by another; Bradfield & Aquino, 1999).

More recently, research has begun to look at psychological, social, and environmental factors that may influence the likelihood of seeking vengeance. Of note, these factors are unrelated to the specific act(s) associated with the perceived violation of interpersonal injustice. For instance, consistent with the finding that most school shootings are committed by boys, Cota-McKinley, Woody, and Bell (2001) found that males, more so than females, were accepting of vengeful attitudes. In addition, Cota-McKinley and colleagues found that individual’s espousing biblical literalness were more likely to have a positive attitude toward revenge than those without such beliefs. However, recent research has overlooked the role of media violence on vengeance. Given that perpetrators of revenge based violence (e.g., school shootings) often immerse themselves in violent media, such an assessment is warranted.

Although the impact of media violence has been under-reported by news services (Bushman & Anderson, 2001), research has consistently found that exposure to violent media appears to increase aggressive behavior, thoughts and feelings in children, adolescents, and young adults (Anderson, 1997). The vast majority of this research has focused on portrayals of violence in television, movies, and, more recently, video games. However, an understudied source of violent content to which children and adolescents are exposed comes from comic books. Although the effects of violent comic books on children came under scrutiny in the 1950s, today, the deleterious effects of video games are receiving a great deal of interest from both researchers and politicians. However, scores of comic books currently being sold are also laden with extreme depictions of violence. For instance, comic books such as *Homicide*, *Spawn*, and *Evil Ernie* frequently depict brutal acts of aggression. These acts include graphic illustrations of bloody decapitations, vivid eviscerations, and sinewy amputations. The weapons used to commit these heinous acts range from machine guns to machetes and an array of body parts including fingernails, toenails, and teeth.

Comic books, unlike video games, do not provide a continuous story in which all of the action relevant to the story line is exhibited. In comic books, the story line is told in partially connected frames. Thus, to create a continuous story line, the reader provides continuity between frames. For instance, if one frame depicts a muscular hero swinging an ax toward his crouching enemy, the next frame would show the victim’s head severed from his body, spurting blood. Thus, it is up to the reader to visualize that actual decapitation. This type of disconnected presentation of information forces the reader to engage their imagination and become active participants in the violence-laden story line (McCloud, 1993). Furthermore,
another factor contributing to story line engagement is that comic books are read at a comfortable, self-guided pace (Potenza, Verhoeff, & Weiss, 1996).

There are several advantages of using comic books to assess the impact of media violence. In contrast to playing a video game, reading a comic book is devoid of arousal associated with motor movements. Although much of the arousal associated with violent video games will come from the violent components of video game play, the arousal associated with motor movements becomes an unwarranted artifact that has the potential to confound data. In contrast, the physiological arousal experienced by a comic book reader will most likely be due to the images in the comic books alone or an interaction of the images with the individual's personality characteristics. Furthermore, comic books may be less likely than video games to cause the participants to feel frustrated. Assessments of video games typically require participants to play a video game for 10-20 minutes and then stop, regardless of where they are in the game. It is possible that participants feel frustrated from having to stop playing the game prematurely. In contrast, when using comic books as the medium of media violence, an individual typically gets to read an entire comic book. In addition, the outcome (e.g., winning or losing) the video game being played can cause frustration. For instance, Kirsh (1998) found that children that tied a basketball video game gave more hostile responses to ambiguous provocation questions than children either winning or losing a basketball video game. Furthermore, it is difficult to find a sample of participants who don't play video games regularly. Estimates suggest that 84% of adolescents play video games on a frequent basis (Funk, 1993; Walsh 1999). In contrast, because comic books aren't nearly as popular as video games, the impact of previous exposure to the experimental stimuli is mitigated. Thus, the outcomes associated with reading violent comic books may be less likely than video games to be influenced by confounds such as motor arousal, frustration and previous exposure to the stimuli.

Given the convergent validity of the effects of different forms of violent media on aggression (Bushman & Anderson, 2001), the findings associated with comic book violence should be similar to those of other forms of violent media. Recent research suggests this is the case. For instance, studies involving comic books (Kirsh & Olczak, 2000) and video games (Lynch, Gentile, Olson, & van Brederode, 2001) have demonstrated links between media violence and inferring hostile intent to the actions of another, even though the intent of that individual is unclear (Dill, Anderson, Anderson, & Deuser, 1997; Dodge, 1980). Dodge (1986) contends that individuals act aggressively and perceive hostility (when none is present) due to biases in social information processing. According to Dodge’s social information processing model, when frustrated or hurt in social situations (e.g., being pushed into a puddle), a series of social cognitive steps are enacted. Dodge’s social information processing steps include encoding of social cues (e.g., look at smiling provocateur), interpretation of social cues (e.g., provocateur has a malicious smile; harm was done on purpose), problem solving strategies (e.g., aggressive retaliation usually works), and the enactment of behavior (e.g., hit the child). In support of this theory, research has shown that the social information processing of aggressive children is replete with aggression laden (i.e., aggressively biased) perceptions, interpretations, and decision making (Dodge & Crick, 1990).

Despite the high level of aggression in comic books, little recent research has assessed the impact of violence in comics on aggressive behavior and thoughts. (Potenza, Verhoeff, & Weiss, 1996). The research that has been conducted, however, suggests that exposure to
violent themes in comic books may aggressively bias an individuals' social information processing. For instance, Kirsh and Olczak (2000) biased the social information processing of adult males towards aggression (e.g., increased levels of hostile attributions about intent), but not females, by having them read violent comic books. Although Kirsh and Olczak's (2000) initial research on overt aggression suggested that violent comic books may have a bigger negative impact on the social information processing of males than females, more recent research suggests that type of aggressive conflict assessed may also be important. Specifically, Kirsh and Olczak (2002) found that both males and females demonstrate increased aggressive responding when the dependent variable involves judgments of relational aggression (however, the level of biased responding did not differ between males and females). Relational aggression involves social exclusion (e.g., not inviting someone to a party) or social manipulation (e.g., spreading rumors, threatening not to be a friend) in order to control another's behavior (Crick, 1995). Kirsh and Olczak's findings are consistent with previous research suggesting that the presence or absence of aggression-related gender differences may be related to the type of aggressive conflict under study (e.g., relational or overt aggression; see Bartholow and Anderson, 2002).

Why then, should we expect to see violent comic books influence the likelihood of seeking vengeance? According to Bushman (1998), exposure to media violence can prime an individual's aggressive network. An aggressive network contains associations among aggressive thoughts, aggressive memories, provocation stimuli, potential responses to provocations, and concomitant emotions. In addition, an accessible network is believed to aid in the processing and interpretation of social information (Bushman, 1998). An aggressive network becomes accessible through frequent use or through a temporary increase (i.e., priming) due to exposure to aggressive stimuli (e.g., violent media). Importantly, the content of the aggressive stimuli (e.g., hitting, kicking) involved in priming the aggressive network does not have to be related to the observed aggressive behavior (e.g., threat, gossiping) or thoughts resulting from an accessible aggressive network (Bushman, 1998). For the present study, the violent comic books should prime participants' aggressive networks, potentially influencing participants' responses to the vengeance scenarios. Thus, it is hypothesized that individuals exposed to the extremely-violent comic book will respond with a higher level of vengeance than individual's reading the nonviolent comic book.

Since repeated activation of an aggressive network should make it chronically accessible (Bushman, 1998), individuals with high trait hostility are believed to process social information with an aggressive network. In support of this contention, Epps and Kendall (1995), found a significant relationship between trait hostility and hostile attributional bias. Similar findings have been found by Kirsh and Olczak (2000). Thus, based on previous research, we expect to find that individuals high in trait hostility will be more likely to respond vengefully than participants low in trait hostility.
METHOD

Participants

The participants were 92 introductory psychology students (56% female) at a mid-sized college in western New York State.

Procedure

At the beginning of the semester, participants filled out the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957) to assess their trait level of hostility. Approximately 6-10 weeks later, these participants were recruited to participate in the comic book study. Research assistants randomly assigned participants to one of two conditions: Extremely-violent and Nonviolent. Participants in the Extremely-violent condition read comic books with a high degree of violence and aggressive themes. To help equate the two experimental conditions on reading, related boredom, and fatigue, participants read either two extremely violent comic books or a one to one-and-a half non-violent comic books, depending upon their assigned condition. Prior to reading their assigned comic books, participants’ experience with comic books and their trait hostility were assessed. After reading the comic books, participants rated the comic books on a variety of dimensions. Finally, participants responded to six hypothetical scenarios in which the likelihood of vengeance was assessed.

Materials

The extremely-violent comic books shown to participants were Cremator, Curse of the Spawn, Dark Realm, Evil Ernie, Homicide, Purgatory, and Undertaker. The panels in the extremely-violent comic books depicted amputations, blood letting, fighting, gore, killing, threatening words, property destruction, and forcible restraint. The nonviolent comic books shown to participants were Archie, Cherry Blossom, Dexter's Laboratory, Pocohontas, Rugrats, and Sabrina. The panels in the nonviolent comic books contained occasional mildly-violent acts and/or aggressive themes such as pushing and name calling. Both conditions involved approximately 20 minutes of reading.

Comic Book History Form. Participants were asked to provide a list of comic books they have read in the last six months and how often they read comic books.

Comic Book Rating Form. To reduce demand characteristics and maintain the ruse that we need comic book ratings for a future study, participants rated the violence (Aggression), humor (Humor), interest level (Interest), and overall likeability (Like) of their assigned comic book. All questions involved 7 point Likert-type scales.

Predispositional Anger. Participants' propensity to respond to a variety of situations with anger was assessed using the Buss-Durkee Hostility Inventory. The Buss-Durkee Hostility Inventory consists of 75 true-false questions made up of seven subscales and a total hostility score. Studies using the total score on the Buss-Durkee Hostility Inventory as a global
measure of hostility have found that high scorers retaliated sooner and delivered significantly more and stronger shocks to another person than low scorers in an experimental aggression situation (Knott, 1970), and that they perceived significantly more aggression than low scorers in a binocular rivalry situation (Petzel & Michaels, 1973). Median splits were used to create High Hostility and Low Hostility variables.

**Vengeance.** For the assessment, participants responded to six hypothetical scenarios in which the likelihood of vengeance was assessed (Cota-McKinley, Woody, & Bell, 2001). Two of the scenarios involved a friend; two involved a relative; and two involved a significant other. The following is an example of the scenarios that participants read:

*Your boyfriend or girlfriend is someone who has been preaching to you since the beginning of the relationship that they would never cheat on you. Your partner also is someone who becomes extremely jealous when you talk to a member of the opposite sex. Your partner has been constantly asking you to come out dancing with him/her. You dislike going to nightclubs and dancing. One night you decide to surprise your partner by meeting him/her at a nightclub. However, the surprise is on you. You find him/her with someone else.*

Participants were asked to rate the likelihood of seeking vengeance using a 7 point Likert-type scale. Responses from the six scenarios were tallied to create a “revenge” score (Cronbach’s alpha = .81).

**RESULTS**

**Preliminary Analyses**

Few participants in this study had recently read a comic book. In fact, only 7.5% had read a comic book (violent or nonviolent) in the last six months. Thus, prior experience reading comic books does not appear to be a factor in this study.

To verify that the comic books were categorized correctly, a 2 (Comic Book) X 2 (Gender) analysis of covariance (ANCOVA) was conducted for perceived aggression, with trait hostility as the covariate. Results indicated a significant main effect for comic book, *F*(1,82) = 255.4, *p* < .0001, with extremely-violent comic books (M = 6.1; SD = 1.0) being rated as significantly more violent than nonviolent comic books (M = 2.1; SD = 1.3). The main effect for Gender, *F*(1,82) = .3, *p* < .86 and the Comic Book X Gender interaction effect, *F*(1,82) = .19, *p* < .66, were both nonsignificant.

To test for differences in participants' perceptions of the comic books, a series of analysis of variance was conducted. For Like, there was a significant main effect for Comic Book, *F*(1,82) = 6.8, *p* < .01. Participants liked nonviolent comic books significantly more than extremely-violent comic books. For Humor, there was a significant main effect for Comic Book, *F*(1,82) = 20.9, *p* < .001, in which nonviolent comic books were rated as significantly more humorous than extremely-violent comic books. The main effect for Interest was not significant. However, the Comic Book X Gender interaction effect was significant for both Like, *F*(1,82) = 16.9, *p* < .001 and Interest, *F*(1,82) = 20.8, *p* < .001. For Like, follow-up pair wise comparisons indicated that males liked extremely-violent comic books more so than
females (p < .001). For Interest, pair wise comparisons indicated that females were more interested in nonviolent comic books than males (p < .001). Conversely, males were more interested in extremely-violent comic books than were females (p < .001). Given that participants’ perceptions of the comic books may influence their responses to the ambiguous stories, Like, Humor, and Interest were entered as covariates in subsequent analyses. Table 1 presents means and standard deviations for the comic book ratings.

Table 1. Estimated Means and Standard Deviations (in parentheses) for Comic Book Ratings

<table>
<thead>
<tr>
<th>Comic Book Type</th>
<th>Nonviolent Comic Books</th>
<th>Extremely-Violent Comic Books</th>
</tr>
</thead>
<tbody>
<tr>
<td>How aggressive did you find your comic book?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>2.2 (1.3)</td>
<td>6.1 (1.0)</td>
</tr>
<tr>
<td>Male</td>
<td>2.0 (1.2)</td>
<td>6.2 (1.0)</td>
</tr>
<tr>
<td>Total</td>
<td>2.1 (1.3)</td>
<td>6.1 (1.0)</td>
</tr>
<tr>
<td>How much did you like your comic book?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3.9 (1.1)</td>
<td>2.0 (1.0)</td>
</tr>
<tr>
<td>Male</td>
<td>3.2 (1.5)</td>
<td>3.7 (1.4)</td>
</tr>
<tr>
<td>Total</td>
<td>3.6 (1.3)</td>
<td>2.7 (1.4)</td>
</tr>
<tr>
<td>How interesting did you find your comic book?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4.0 (1.2)</td>
<td>2.6 (1.3)</td>
</tr>
<tr>
<td>Male</td>
<td>3.0 (1.2)</td>
<td>4.4 (1.7)</td>
</tr>
<tr>
<td>Total</td>
<td>3.5 (1.3)</td>
<td>3.4 (1.7)</td>
</tr>
<tr>
<td>How humorous did you find your comic book?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>3.3 (1.1)</td>
<td>1.8 (1.0)</td>
</tr>
<tr>
<td>Male</td>
<td>3.0 (1.4)</td>
<td>2.2 (1.1)</td>
</tr>
<tr>
<td>Total</td>
<td>3.2 (1.3)</td>
<td>2.0 (1.0)</td>
</tr>
</tbody>
</table>

Main Analyses

In order to test the contention that the extremely-violent comic books influence the likelihood of seeking vengeance, a 2 (Comic Book) X 2 (Gender) X 2 (Hostility) ANCOVA was conducted, with Humor, Like, and Interest as the covariates and the tallied responses to the hypothetical vengeance scenarios as the dependent variable. The main effect for Comic Book was significant, \( F(1, 82) = 4.97, p < .03 \). Results indicated that participants reading extremely-violent comic books (\( M=35.1, \ SE = 1.0 \)) were significantly more likely to seek vengeance than participants reading nonviolent comic books (\( M=31.6, \ SE =1.1 \)). See Figure 1. In addition, the main effect of Trait Hostility was also significant, \( F(1, 82) = 4.01, p < .05 \). Participants high in trait hostility (\( M=34.6, \ SE = 0.9 \)) reported significantly more vengeance than individuals low in trait hostility (\( M=32.1, \ SE = 0.9 \)). See Figure 2. The main effect for Gender and all interaction effects were nonsignificant.
Figure 1. Tallied Revenge Scores as a Function of Comic Book

![Bar chart showing revenge scores for nonviolent and extremely-violent comic books, with extremely-violent comic books having higher revenge scores.]

Figure 2. Tallied Revenge Scores as a Function of Trait Hostility

![Bar chart showing revenge scores for low and high hostility, with high hostility having higher revenge scores.]

Comic Book Violence and Vengeance
Although males and females perceive the same level of violence in both the extremely-violent comic books and nonviolent comic books, males liked and showed more interest in extremely-violent comic books whereas females liked and showed more interest in nonviolent comic books. These findings are consistent with previous research. For instance, Collins-Standley, Gan, Yu, and Zillman (1996) demonstrated that two- to four-year-old boys preferred fairy-tales replete with violence whereas same age girls preferred romantic fairy-tales. Similarly, Valkenburg and Janssen (1999) established that 1st through 4th grade Dutch and American boys, more so than same-aged girls, preferred television shows with violence. Thus, cutting across age, culture, and presentation medium (e.g., television, books, and comic books) males, more so than females, generally prefer media laden with violence. The question of why males and females perceive similar levels of aggression, but prefer different levels of aggression remains an intriguing one. Research has shown that preferences are not readily predictable from cognitive judgments (Zajonc, 1998). Thus, much more research is needed to determine the relationship between the objective properties of stimuli perception and the objective features of the stimuli that account for our preferences (Zajonc, 1998). However, social cognitive factors such as appraisals and interpretations influence the likelihood of an individual acting aggressively (Anderson & Bushman, 2002). Perhaps perceiving extremely violent material as being humorous, likeable and interesting alters the impact of those acts. Research on adolescent’s television watching and aggressive tendencies supports this contention. Walker and Morley (1991) found that the biggest predictor of adolescent aggressive intent was liking television violence, rather than simply viewing television violence.

Similar to Cota-McKinney et al. (2001), gender differences in vengeance responding were not evident. In contrast, previous research has frequently demonstrated a link between gender and attitudes towards vengeance, with males possessing a more favorable one (Baron & Richardson, 1994; Stuckless & Goranson, 1992). Thus, while self-reported attitudes towards vengeance may differ between males and females, it is possible that their likelihood of seeking vengeance is similar. In the past 30 years, research in social psychology has shown the link between attitudes and behavior to be a complex one. For example, Russ Fazio and his colleagues have demonstrated a number of different factors or “moderators” to exist, including aspects of the situation, aspects of the attitudes themselves (including their origin, strength, and specificity), and aspects of the individual, such as their personality (see Fazio & Roskos-Ewoldsen, 1994). Thus, when assessing the impact of violent media on social information-processing, researchers may need to more carefully consider the nature of the dependent variable (e.g., attitudes vs. ratings of likelihood vs. actual behavior).

Huesmann (1988) contends that in response to experiences with aggressive behavior, including the observation of aggressive acts performed by others, individuals develop aggressive scripts. These scripts contain information regarding the participants and events surrounding the aggressive act, such as the nature of the provocation and subsequent response. A review of the literature suggests that males and females may have different aggressive scripts, with the aggressive scripts of males focusing on overt aggression (e.g., hitting or pushing) and the aggressive scripts of females focusing on relational aggression (e.g., social exclusion or social manipulation; Geen, 1998). In the present study, the
dependent variable involved the rated likelihood of vengeance. It may be that although both males and females showed similar levels of vengeance responding, their plans for carrying it out may differ (i.e., overt vs. relational). Determining the nature of the vengeance response, as a function of gender, is an important area for future research.

In any case, the results of the present study are consistent with research showing a link between aggressive themes in comic books and aggressive feelings (Brand, 1969) and perceptions of social situations (Kirsh & Olczak, 2000) as well as earlier work finding relationships between exposure to violent media and aggressive biases in social information processing (Anderson & Dill, 2000; Bushman & Geen, 1990; Lynch et al., 2001). As predicted, exposure to extremely-violent comic books influenced the perception of vengeance responding to hypothetical provocation situations. Participants showed evidence of aggressive biases in social information processing in that they manifested more vengeance responding after reading extremely-violent comic books, as compared to nonviolent comic books. These data support Bushman's (1998) contention that an active aggressive network influences social information processing, even if the source of the activation is different than the type of aggressive responding displayed. In addition, the results of the current study suggest that extremely-violent comic books influence social information processing in a manner similar to that of other forms of violent media, such as video games (Anderson & Dill, 2000), movies, and television (Geen, 1998). As predicted, individual's high in trait hostility reported more vengeance responding than individual's low in trait hostility. This finding supports Bushman's (1998) contention that an individual with a chronically aggressive network (e.g., a person high in trait hostility) will demonstrate biased social information-processing in that direction.

Bies, Tripp, and Kramer (1997) contend that vengeance is a multistep process. First, an individual experiences a perceived wrong. Second, following a period of rumination, the individual holds the provocateur accountable. Finally, the individual experiences anger, thus increasing the likelihood that an act of vengeance will follow. According to Bushman (1998), exposure to media violence can prime an individual's aggressive network. An aggressive network contains associations among aggressive thoughts, aggressive memories, provocational stimuli, potential responses to provocations, and concomitant emotions. An aggressive network becomes accessible through frequent use or through a temporary increase (i.e., priming) due to exposure to aggressive stimuli (e.g., violent media). The content of the aggressive stimuli (e.g., hitting, kicking) involved in priming the aggressive network does not have to be related to the observed aggressive behavior (e.g., threat, gossiping). In addition, an accessible network is believed to aid in the processing and interpretation of social information. The current data suggest that exposure to comic books, and therefore most likely others forms of violent media, may influence the likelihood of seeking revenge by activating an individual's aggressive network. In turn, the activated aggressive network may affect revenge related cognitions, such as accountability and revenge related emotions, such as anger. Previous research on media violence has consistently shown that both affects and cognitions are negatively biased following exposure to media violence (Anderson & Bushman, 2002). However, it should be stated that exposure to violent media is just one of many factors that influence revenge. Future research needs to assess the major risk factors associated with vengeance to determine their relative health threat.

As a caveat, there are several methodological limitations to the current study. First, the present results were found using a relatively small sample of comic books (i.e., 6-7 comic
books per condition), thus, potentially limiting the generalizability of the findings (Wells & Windschitl, 1999). Second, it is possible that some subjects figured out the intent of the study and responded accordingly. Third, there were very few participants in the current study who frequently read comic books. Thus, additional research is necessary to determine whether or not frequency of exposure to this form of violent media influences social information processing. Finally, additional research is necessary to determine the link between media violence, the interpretation of hypothetical vengeance scenarios, and actual acts of aggression.
REFERENCES


