

The Raw Nature of Televised Professional Wrestling: Is the Violence a Cause for Concern?

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This study examined physical violence portrayed in a sample of televised professional wrestling. Trained research assistants coded the frequency of violent interactions, perpetrator characteristics, and contextual features (extent of violence, use of weapons, consequence of violence, reasons for violence, and reward for violence). Wrestling was compared with a sample of prime-time television from the National Television Violence Study (Smith, Nathanson, & Wilson, 2002). Findings show that the extent of violence in wrestling is significantly greater than other prime-time genres and that wrestling more often portrays violence as justified, likely to go unpunished, and unlikely to produce extreme harm. Overall, wrestling presented violence in amounts and contexts linked with increased risk of harm to viewers.

Professional wrestling has smashed its way into American popular culture. Surveys show the magnitude of its appeal as ratings and revenues have risen to unexpected heights. World Wrestling Entertainment's (WWE) *Monday Night Raw* program soared in popularity during the late 1990s, reaching as many as 8 million cable viewers a week by 1999 ("Raw Ratings History," 2003). Although the appeal of professional

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wrestling is not limited to any one demographic audience, reports show its strong appeal to adolescent viewers. According to year-end 2002–2003 Nielsen ratings, on average, 483,000 children ages 2 through 11 watch *Raw* and 822,000 watch *Smackdown* every week. The numbers are even larger for children 9 through 14, with an average of 627,000 weekly for *Raw* and 847,000 for *Smackdown*.

Wrestling's appeal with the adolescent market has resulted in criticism from a variety of sources. Consistently, the Parents Television Council (2001) has ranked WWE programming among the worst shows on both network and cable television, calling it too violent for family hour programming. Scholars have condemned professional wrestling for lacking any human dignity in its portrayal of violence (Raney, 2003) and for fostering fighting among impressionable youth ("The Evidence Against Media Violence," 2001). Limited research indicates that young children perceive wrestling as more realistic than do adolescents and adults (British Broadcasting Standards Commission, 2001). Because realism strengthens the ability of television violence to increase viewer aggression (Bandura, Ross, & Ross, 1963), initial indications that young children are watching and likely to perceive the violence as real compels us to learn more about the manner in which wrestling violence is portrayed.

Researchers have argued that contextual features associated with TV violence are critical in determining its influence on youthful viewers (Wilson et al., 1997). Despite the fact that many young viewers are ardent fans of wrestling, we know little about the manner in which it portrays violence. Recent inquiries into the content and effects of mass media on children and adolescents have focused on highly specific types of programming, including children's programming (Wilson et al., 2002) and music videos (Smith & Boyson, 2002), yet we know little about the content of wrestling. Although we can only speculate about why wrestling violence has been generally overlooked, we are concerned that television might portray wrestling violence in a manner potentially more damaging than the violence in other genres. An assessment of the amount and context of violence might help determine whether or not professional wrestling contains the type of violent portrayals that might engender aggressive reactions in its audience.

Research on Televised Wrestling

Scattered research on televised wrestling examines gender differences in motivations for viewing (Lemish, 1998), self-reports of behavioral imitation (Lemish, 1997), and perceptions of wrestling realism among young children, adolescents, and adults (British Broadcasting Standards Commission, 2001). Two other studies on live exposure to wrestling have examined effects on audience aggression (Arms, Russell, & Sandilands, 1979; Kingsmore, 1968). Yet this research provides little information on patterns of exposure to televised wrestling or details of violent content.

Two recent studies of British TV content show that some of the most violent televised programs on British television were World Wrestling Federation (WWF) produc-

tions (Gunter & Harrison, 1998; Gunter, Harrison, & Wykes, 2003). However, little here informs us about the nature of the violent content, and the meager evidence on American wrestling is even less informative. One story televised on *Inside Edition* reported the results from an Indiana University content analysis on 50 episodes of *Raw* broadcast in the United States. The authors reported more than 1,600 instances of crotch-pointing gestures, nearly 1,500 uses of the words *hell* or *ass*, and over 600 cases where objects like steel chairs or tables were used as weapons (Raney, 2003). Although public response to the story was strong, the research itself was never published, and the issues related to it remain largely unexplored.

Research on Media Violence

Debate over violent media's effect began long before the recent explosion in professional wrestling's popularity. Social critics have targeted violence in all televised forms throughout the medium's brief existence (Lowrey & DeFleur, 1988). Although some rebuke these critics by citing a lack of convincing evidence, or effect sizes small enough to question their practical significance (Freedman, 1988; McGuire, 1986), meta-analysis reveals a substantial relationship between television violence and aggressive behavior (Paik & Comstock, 1994). Recent work in this area suggests that contextual features of program content moderate the effect of media violence on aggressive outcomes. Consequently, diverse causal patterns are found for exposure to various types of violent media. Much of the theoretical research in this area now focuses on identifying the contextual features of violent media that facilitate or inhibit aggressive response. Perhaps the most notable effort here is the National Television Violence Study (NTVS; Wilson et al., 1997).

Based on their review of the television violence literature, NTVS researchers (Wilson et al., 1997) identified a set of contextual factors recognized as moderators of violent media's effect on the learning of aggressive behavior. Their review suggests that increased aggressive response (and in some cases desensitization or fear) results from violence that is justified, involves "good" perpetrators, is laden with weapons, is extensive or graphic, is realistic, is rewarded or not punished, and is humorous. By contrast, a decrease in aggression is associated with portrayals of unjustified aggression, punishment, and victim pain or suffering. In an effort to examine the context of televised violence, NTVS devised a content coding scheme designed to capture the presence of these features and applied it to a comprehensive sample of U.S. television content.

The resulting picture showed that much of television violence is presented in a context suggested by theory to increase its harm on viewers. That is, many of the perpetrators on television often went unpunished, negative consequences were seldom shown, and many acts were committed with handguns. Although NTVS looked at these contextual variables across many program types, their exclusion of sports leaves questions about wrestling violence unanswered (Wilson et al., 1997). Does violence in professional wrestling differ from violence in other television programming? Does professional wrestling present violence in a context that poses greater risks for viewers? Al-

though we might speculate that violence in professional wrestling differs, the lack of empirical research in this area leaves the nature of these differences unclear. This study is designed to answer such questions by applying the NTVS coding scheme to a sample of prime-time televised professional wrestling. The results of this analysis are then weighed against findings from the more comprehensive sample of prime-time television programming reported by NTVS researchers (Smith, Nathanson, & Wilson, 2002). Our comparison of wrestling to other televised content attempts to answer the following research questions:

- RQ₁: How does the amount and context of violence in professional wrestling compare with violence in the overall NTVS sample of prime-time television?
- RQ₂: How does violence in the wrestling genre compare to violence in other prime-time television genres (i.e., drama, comedy, children's programs, movies, video, and reality shows)?

To answer these questions in detail, we look specifically at the frequency and extent of violent interactions in professional wrestling as well as the characteristics associated with the nature of violent perpetrators and the contextual features of violent acts (e.g., use of weapons, consequences of violence, reasons for violence, justification for violence, and rewards for violence).

Method

Sample

Wrestling content was drawn from an intact sample of 10 weeks of prime-time television programs taking place during the fall of 2002. Each week, a total of 4 hours of new wrestling programming appeared on prime-time television. This included the TNN cable show *WWE Raw* (Monday nights from 9 p.m. to 11 p.m.) and the UPN network show *WWE Smackdown* (Thursday nights from 8 p.m. to 10 p.m.). Two episodes were omitted due to technical problems with the recording, bringing the final sample to 36 hours of programming. Following the collection of wrestling programming on VHS tape, the tapes were transferred into a DVD-R electronic file format and saved on writable compact disk. This procedure was included to establish a very precise time code for use in unitizing the acts to be coded in this study. Given the uncommon frequency and speed with which violent acts begin and end in TV wrestling, this precise time code was considered essential for obtaining reliability in the initial establishment of these units and thus reducing resulting intercoder reliability problems within the evaluation of content.

Defining Violence and Units of Analysis

Consistent with the NTVS, acts of violence in this study were defined as follows: any overt depiction of a credible threat of physical force or the actual use of such force

intended to physically harm an animate being or group of beings. Violence also includes certain depictions of physically harmful consequences against an animate being (or beings) that result from unseen violent means (Wilson et al., 1997).

Violence was measured at the level of individual interactions, using protocols from the NTVS. A violent interaction was defined as an aggressive exchange that occurs when a unique perpetrator (P) engages in a particular type of act (A) against a unique target (T). A new PAT line was started whenever the perpetrator, type of violent act, or target of violence changed. Additional coding was done at the scene level. A scene was defined as a related sequence of violence that occurs without a significant break, in line with the NTVS definition.

Measures

Coders were instructed to take the perspective of a "naive viewer" in making classifications. Much like soap operas, professional wrestling contains storylines that are ongoing or carried over from episode to episode. Two steps were taken in order to control for variability in this interpretation based on prior knowledge of the storyline. First, coders were instructed to make decisions on all original NTVS categories based only on information that could be determined from the context of the plot under observation. Second, in order to account for preexisting character dispositions and those stemming from norms unique to wrestling and not fitting NTVS definitions, coders also classified perpetrators as "faces" (good guys) and "heels" (bad guys).

Coding began at the level of the PAT line. More detailed descriptions of all variables reported here (except where noted) can be found in the NTVS (Wilson et al., 1997). First, the *extent* (or number of acts within a PAT line) was both counted and coded as either one (1 act), some (2–9 acts), many (10–20 acts), or extreme (≥ 21 acts). Unlike NTVS, coders initially recorded the raw number of violent acts within a given PAT line. This was done to describe more accurately the variability in the extent of violence within PAT lines. For instance, in the NTVS coding scheme, a PAT line with 20 acts of violence and one with 100 acts of violence would both be coded as "extreme." The raw counts in our study were later collapsed into the NTVS categories in order to draw comparisons between the two data sets. Second, the *perpetrator and target* were classified in terms of biological sex (male, female, or unknown), ethnicity (White, Black, Hispanic, Asian, Native American, or Middle Eastern) and goodness or badness (good, bad, neutral, blended, or could not tell). Because many wrestlers are popular but might not fit the NTVS definition of a "good guy," coders classified perpetrators as a "face" or "heel," to use wrestling industry terminology for good and bad characters, respectively. This was done by judging the crowd reaction to the characters. Third, the *primary means of violence* was noted: natural (e.g., kick, punch), handheld firearm, unconventional weapon (e.g., a lead pipe), conventional weapon (e.g., brass knuckles), heavy weaponry (e.g., a rocket launcher), bombs, or unknown. Fourth, *depicted harm and depicted pain* were assessed and coded as either none,

mild, moderate, extreme, or not shown. Using the same response options, likely harm was coded as a measure of the expected consequence of each act if perpetrated in the real world. Fifth, the *reason for violent action* was assessed. Each act was classified into one of several reasons: personal gain (e.g., obtaining money, power); protection of life (e.g., to save a victim); anger; amusement or mental instability; retaliation (e.g., in response to a previous violent act); accident; or other/unknown. Notably, a new reason—mandated—was added for this study.

We see inclusion of “mandated” as a significant addition to the NTVS coding scheme and one necessitated by the unique character of motivation for much of the violence found in sports. Unlike other reasons for violence in the NTVS scheme, many (although not all) violent interactions in wrestling were expected to occur as a sanctioned part of a match or competition. This motivation seems distinct along theoretically important dimensions. For example, some might consider this type of violence belonging to the NTVS category of personal gain—or “violence accomplished for gaining material goods/objects, power, status, popularity or affection from others” (NTVS, 1996, p. 41). Included here are acts like thieves stealing money from a bank or drug addicts stealing cocaine from a dealer. However, it seems inappropriate to consider aggression committed as a sanctioned part of “sport” akin to the forms of unsanctioned behavior representative of personal gain. Material gain is limited because the reward structure does not compensate TV wrestlers based on their win–loss record. Moreover, monetary rewards are rarely mentioned in dialogue. Similarly, coding violence in sport that is not only sanctioned but a job-related requirement as an act motivated by the desire to gain “power, status, popularity or affection” would be akin to labeling police violence committed to fight crime as a form of personal gain. Quite the contrary, the use of violence by police to fight crime falls clearly into the NTVS category of protection of life—or “violence intended to protect the self or others against actual, potential, or perceived physical harm” (NTVS, 1996, p. 39).

Although there is some element of protection involved in the motives for violence mandated by rule in some sports, there are clear differences between violence performed for reasons characterized by protection of life and acts performed in sport. A boxer does not strike another boxer for self-protection but rather to gain advantage in competition; however, it is not the type of competitive advantage coded by the NTVS as personal gain. Sport violence mandated by rule is distinct, and this distinction is notably integrated with attributions of violence as justified. Whereas personal gain as a reason for violence is categorized by NTVS researchers (Wilson et al., 1997) as unjustified, it is difficult to imagine that sanctioned sports violence would be considered unjust. With this theoretically important distinction in mind, it was determined that violent acts compelled by rule as part of sport (in this case wrestling) should be labeled mandated.

After coding each PAT line in terms of reason for violent action, justification of violence was coded. Consistent with the first-year coding of NTVS (Wilson et. al, 1997), acts committed for protection of life or out of retaliation were collapsed into a justified

violence category. In addition, because the primary goal of wrestling requires competitors to square off in battle, mandated acts were also considered justified. Therefore, the composite variable justified violence contains acts coded as being perpetrated for mandated, protection of life, and retaliatory reasons. We should note that separate analyses are reported with and without the inclusion of mandated violence. This was done knowing that inclusion of this new category would make some readers question our comparisons of justified violence in wrestling to NTVS data.

In addition to these measures of violence coded at the PAT level, the presence of rewards and punishments was assessed at the scene level. Rewards were coded into four categories including self-praise, praise from others, and material reward (such as money). In addition, a new category—crowd praise—was added to the NTVS scheme to account for instances in which the crowd at a wrestling event “cheered loudly” when a violent act was performed. Similarly, punishments were coded into the categories of self-condemnation, violent punishment, nonviolent punishment, and a new category—crowd condemnation—for cases in which the crowd disapproved of a violent act by booing. Although praise and condemnation from other characters may indicate how other characters feel about an act of aggression, responses from the audience may indicate whether or not the act is interpreted as acceptable or unacceptable, regardless of the allegiances and motives of the wrestlers. In evaluating content that may play an inhibiting or disinhibiting role in aggressive responses, crowd response may be a more compelling source of praise and condemnation because it exists outside of these dispositional concerns. For this reason, the categories of crowd praise and crowd condemnation were added.

Finally, in order to compare our wrestling results to the results for prime-time programs reported in Smith et al. (2002), some of the aforementioned variables were collapsed for later analyses. Good/bad was collapsed into attractive (good or mixed) versus unattractive (bad or neutral). Under reasons for violence, accident was added to the category of other or unknown. At the scene level, the rewards and punishments categories were collapsed into rewards for violence (versus no rewards) and no punishments (versus punishments).

Training and Reliability

Four well-trained research assistants served as coders in this study. Initial efforts at pilot coding revealed that the unusual speed, repetition, and overlap of PAT lines led to a great deal of inaccuracy with both unitizing and coding. Several solutions were attempted. The most effective was to split the coders into two teams: one to unitize the data, and a second to code it. This approach allowed coders to reach acceptable levels of reliability on both unitizing and coding. The first two coders viewed all 36 hours of programming to establish the beginning and end point of each PAT line. The second two coded each established PAT line for all contextual variables of interest. Cronbach's alpha was used to assess reliability of the team as-

signing units of analysis to the content, and Scott's Pi (Krippendorff, 1980) was used to estimate the reliability of the team identifying content characteristics. Training was conducted using wrestling programs not contained in the final sample. During training, coders participated in a series of reliability tests designed to assess the consistency of their coding judgments on both unitizing PAT lines and ascribing contextual and character codes. Coders were trained until reaching at least a .70 level of agreement on all variables. For the unitizing of PAT lines and scenes, agreement was reached when the beginning and end times of a PAT line or scene identified by both coders fell within 1 second of each other. Scenes were first identified by matching the beginning and end time codes; due to the relatively straightforward criteria for scene changes (ad breaks and changes in physical location), coders reached perfect agreement on identifying scenes. Coders were then asked to identify the number of individual PAT lines within each scene. Cronbach's alpha comparing these scores was .82. Scott's Pi was then used to estimate the reliability of the categorical context variables assigned by the second coding team. For the coding of context variables, Scott's Pi for each of the variables were .86 for perpetrator sex, .88 for perpetrator ethnicity, .84 for good/bad perpetrator, .96 for target sex, .89 for target ethnicity, .91 for good/bad target, .87 for primary reason for violence, .83 for type of act, .80 for depicted harm, .83 for depicted pain, .82 for likely harm, .89 for self-praise, .84 for praise from others, 1.00 for material reward, 1.00 for crowd praise, 1.00 for self-condemnation, 1.00 for violent punishment, .89 for nonviolent punishment, and .96 for crowd condemnation. Reliability for extent equaled .78. As a continuous variable, this was calculated using Cronbach's alpha.

Results

The results are based on analyses describing the frequency of violent acts observed in our sample of professional wrestling ($n = 36$ hours). We compared these findings with the NTVS prime-time sample of 466.5 hours of programming reported in Smith et al. (2002). We compared wrestling both with the overall prime-time sample and with the sample broken down by genre. Chi-square analyses were conducted on percentages within categories as a function of sample (wrestling vs. NTVS prime time) and genre (wrestling, drama, comedy, children's programs, movies, videos, and reality shows). Because the large samples used in this study can produce statistically significant results when small and potentially meaningless differences are observed, we used the conservative criteria established by Smith et al. as a decider when testing for differences across samples or genres. Two criteria were applied. First, the chi-square had to be significant at $p < .05$. Second, the "practical significance" criterion stipulated that there must be at least a 10% difference between two percentages to be considered meaningful. Again, following procedures used by Smith et al., the Scheffé analog to the chi-square test was used to make post hoc comparisons in analyses comparing more than two groups.

Levels of Violence

Levels of violence can be viewed both in terms of the frequency of violent interactions found in a program and the extent of violence found within these interactions. Analyses began by comparing the frequency of violent interactions in professional wrestling with the NTVS sample of prime-time content. First, professional wrestling averaged 13.75 violent interactions per hour. This was more than twice the rate of 6.6 violent interactions per hour found for all NTVS prime-time programs. As shown in Table 1, comparisons with the six specific genres show that wrestling contained the highest number of violent interactions per hour, followed closely by children's programs (12.37) and movies (8.89). Second, whereas all wrestling programs contained violence, this was true in only 61% of the NTVS programs. Chi-square analysis revealed a significant difference in the proportion of shows with violence by genre, $\chi^2(6, N = 454) = 106.51, p < .001, \phi = .48$. Wrestling was highest at 100%, and this is significantly different from the proportion of comedy programs (43%), reality programs (46%), and music video programs (50%) containing violence. Finally, comparisons of programs with saturated violence also revealed significant differences by genre, $\chi^2(6, N = 454) = 195.42, p < .001, \phi = .66$. Post hoc tests showed that no other genre approaches the proportion of wrestling programs (100%) that are "saturated" with violence, meaning that nine or more violent interactions occur within a program.

Comparing the frequency of violent interactions found in wrestling and other NTVS programs is informative; however, comparing the extent of violence within these interactions provides greater insight. It is important to remember that in the NTVS coding scheme a violent interaction does not represent a single violent act; instead, it means a particular perpetrator committed some amount of violence against a particular target during a scene. For example, if Hulk Hogan struck The Rock 100 times dur-

Table 1
Amount of Violence in Prime Time by Genre

	Drama	Comedy	Kids'	Movies	Videos	Reality	Wrestling
Amount of violence							
Rate of interactions/hr	5.81	1.75	12.37	8.89	3.78	2.95	13.75
Programs with violence	82% _{bc}	43% _a	80% _{bc}	93% _c	50% _{ab}	46% _a	100% _c
Programs with saturated violence	34% _c	3% _{ab}	16% _{bc}	68% _d	0% _a	17% _{abc}	100% _e
Interactions with extreme extent of violence	7% _a	5% _a	3% _a	8% _a	3% _a	6% _a	23% _b
Total programs							
No. of program hours	66	49.5	29.5	215.5	32	74	36
No. of programs	62	90	50	104	28	84	18

Note: Percentages here with no subscript letter in common differ significantly ($p < .05$) by Scheffé analog to the chi-square and practically (10% difference).

ing a match (where the match constitutes a scene) these 100 blows would count as one violent interaction. In this case, the level of violence might be more meaningfully indicated by the extent of violence (one, some, many, or extreme) coded.

As seen in Table 2, 25% of wrestling interactions contain one violent act, 34% contain some (2–10 acts), 18% contain many (11–20 acts), and a full 23% contain extreme violence (≥ 21 acts). This pattern is noticeably different from the NTVS sample, in which 39% of interactions contain one violent act, 42% contain 2 to 10 acts, 12% contain 11 to 20 acts, and only 7% contain 21 or more acts. Analyses on the percentage of interactions containing extreme violence are particularly revealing. Chi-square revealed a significant difference in extreme violence across genre, $\chi^2(6, N = 2,515) = 116.83, p < .001, \phi = .22$. Post hoc tests showed that wrestling contains a significantly higher proportion of extremely violent interactions than any other prime-time genre (see Table 1). No other prime-time genre approaches wrestling in percentage of “extreme” violent interactions. The closest NTVS genre is movies, where 8% of all interactions have an extreme number of violent acts. In children’s programming, the NTVS genre with the most violent interactions per hour, less than 3% of all interactions have extreme violence. In wrestling, however, nearly one quarter (23%) of violent interactions contain 21 or more violent acts. Close inspection here reveals that extremely violent interactions in wrestling average 46 violent acts, with some ranging as high as 130 acts. Across all extent categories, each violent interaction in wrestling contains 14.18 separate violent acts on average. At this rate, the rate of violence in wrestling would average 195 violent acts per hour.

Nature of Perpetrators and Targets

A second set of analyses compared characteristics of perpetrators found in wrestling and the prime-time NTVS programs (see Table 2). Chi-square analysis on sex of perpetrators showed a significant difference in perpetrators who are male, $\chi^2(1, N = 3,582) = 64.47, p < .001, \phi = .13$. Wrestling has significantly more male perpetrators (90%) than other prime-time programs (73%). No difference was found in ethnicity however. Analyses examining perpetrators’ attractiveness showed that coders had a hard time discerning whether characters were good or bad. A mere 3% of wrestling perpetrators fit the NTVS definition of good, and only 9% fit the definition of bad. Most were coded as “could not tell” (85%), with 2% coded as blended. Thus, only 3% of wrestling perpetrators are attractive in the NTVS sense compared to 41% of characters in other prime-time programs, which represents a significant difference, $\chi^2(1, N = 3,631) = 268.18, p < .001, \phi = .27$.

In anticipation of difficulty in discerning whether characters were good or bad using the NTVS scheme, coders also classified perpetrators as a “face” or “heel” by judging the crowd reactions. This analysis resulted in 19% of wrestling perpetrators coded as faces and 20% as heels. Our naive coders could not classify the remaining 61% of perpetrators, presumably due to a weak or nonexistent crowd reaction. Although this number might seem surprisingly large at first, it is understandable given

Table 2
Percentages in NTVS Prime-Time and Professional Wrestling Samples

	Prime Time NTVS	Pro Wrestling
Nature of perpetrator		
Sex		
Male	73% ^a	90% ^b
Female	27% ^a	10% ^b
Ethnicity		
White	75%	72%
Black	7%	3%
Hispanic	4%	8%
Disposition		
Attractive	41% ^a	5% ^b
Face	—	19%
Heel	—	20%
Primary reason for violence		
Personal gain	28% ^a	2% ^b
Protection of life	27% ^a	4% ^b
Anger	27% ^a	6% ^b
Retaliation	2%	7%
Amusement/mental instability	4%	4%
Accident/other/unknown	12%	19%
Mandated	—	58%
Justified	29% ^a	69% ^b
Reason for nonmandated violence		
Personal gain	28% ^a	4% ^b
Protection of life	27% ^a	11% ^b
Anger	27% ^a	15% ^b
Retaliation	2% ^a	16% ^b
Amusement/mental instability	4%	10%
Accident/other/unknown	12% ^a	44% ^b
Justified	29%	27%
Primary means employed		
Natural means	35% ^a	91% ^b
Handheld firearm	37% ^a	0% ^b
Unconventional weapon	16%	8%
Conventional weapon	7%	0%
Heavy weaponry/bombs	2%	0%

(continued)

Table 2 (Continued)

	Prime Time NTVS	Pro Wrestling
Primary extent		
Repeated acts (≥ 2)	61% _a	75% _b
One (1 act)	39% _a	25% _b
Some (2–9 acts)	42%	34%
Many (10–20 acts)	12%	18%
Extreme (≥ 21 acts)	7% _a	23% _b
Consequences of violence		
Depicted harm		
None	36% _a	14% _b
Mild	19% _a	66% _b
Moderate	13%	11%
Extreme	23% _a	0% _b
Unrealistic	24%	16%
Depicted pain		
None	44% _a	12% _b
Mild	24% _a	47% _b
Moderate	11% _a	22% _b
Extreme	13% _a	1% _b
Rewards and punishments		
Rewards for violence	23%	16%
No punishments	71% _a	94% _b

Note: In each row, different subscripts indicate significant differences ($p < .05$) between the NTVS percentage and one or both of the wrestling percentages. NTVS = National Television Violence Study.

that little crowd reaction would be expected to occur for the many less-notable or new characters that are regularly introduced in professional wrestling.

Reasons for Violence

The wrestling and NTVS samples were also compared to ascertain how they differ in reasons for violent interactions. In addition to the NTVS categories of personal gain, anger, protection of life, mental instability, retaliation, or other, the wrestling coding scheme also included the mandated reason considered unique to sports and expected to dominate coding. Surprisingly, only 58% of physically aggressive interactions in wrestling were mandated, which means a full 42% of interactions were not compelled by the rules of wrestling. This violence was perpetrated out of anger (6%), retaliation (7%), to protect life (4%), for personal gain (2%), for amusement or out of men-

tal instability (4%), or for other, unknown reasons (19%). Most violence in the prime-time NTVS sample was associated with three motives: personal gain (28%), protection of life (27%), and anger (27%).

Based on the presumption that contextual features moderating exposure to violence are likely to predict different outcomes from exposure to mandated and nonmandated violence, we conducted separate analyses comparing the nonmandated reasons for violence in our data ($n = 208$) with the NTVS sample. Results of chi-square analyses reveal significant differences across the four reason variables reported in the NTVS prime-time television study (see Table 2). Specifically, NTVS shows feature significantly more acts committed for personal gain (28% vs. 4% in wrestling), $\chi^2(1, N = 3,212) = 61.18, p < .001, \phi = .14$; significantly more acts committed to protect life (27% vs. 11% in wrestling), $\chi^2(1, N = 3,212) = 26.50, p < .001, \phi = .09$; and significantly more acts perpetrated out of anger (27% vs. 15% in wrestling), $\chi^2(1, N = 3,212) = 12.94, p < .001, \phi = .06$. Wrestling, on the other hand, has a significantly higher percentage of acts perpetrated with retaliation as the primary motive (16% vs. 2% in NTVS programs), $\chi^2(1, N = 3,212) = 139.36, p < .001, \phi = .21$. In addition, 10% of the nonmandated violent interactions in wrestling were perpetrated for amusement or due to mental instability, and 44% occurred for other or unknown reasons.

In terms of justified violence, a significant difference was found between wrestling and the NTVS shows when mandated violence was included as justified, $\chi^2(1, N = 3,469) = 314.70, p < .001, \phi = .30$. With mandated interactions, almost 70% of wrestling violence would be considered justified, versus 29% of NTVS violence, as shown in Table 2. Among nonmandated interactions, however, the difference in justified violence (27% in wrestling vs. 29% in NTVS shows) does not reach our 10% criterion for practical significance.

Presence of Weapons

Shifting to the primary means of violence, almost all violent interactions in professional wrestling (91%) involve natural or physical means such as punches, dropkicks, slams, and submission holds. Not surprisingly, chi-square results show this to be significantly different than other prime-time shows, in which 35% of interactions involve natural physical means, $\chi^2(1, N = 3,459) = 550.23, p < .001, \phi = .40$. Most of the remaining interactions in wrestling (8%) are perpetrated using unconventional weapons (e.g., the infamous "steel chair"). In contrast, the second most frequent means of violence in NTVS programs is handheld firearms: a full 37% of interactions feature them, versus 0% in wrestling, another significant difference, $\chi^2(1, N = 3,459) = 274.92, p < .001, \phi = .28$ (see Table 2).

Consequence of Violence

The next set of variables examined the consequences of violence in both wrestling and the NTVS prime-time programs. The first consequence looked at was depicted

harm. Chi-square analysis revealed a significant difference in the no depicted harm category, $\chi^2(1, N = 2,624) = 97.76, p < .001, \phi = .19$. A mere 14% of violent interactions in wrestling show no depicted harm, compared to 36% in other prime-type shows. Most violent interactions in wrestling depict harm as mild (66%), which differs significantly from the percentage of interactions depicting mild harm in NTVS shows (19%), $\chi^2(1, N = 2,624) = 435.56, p < .001, \phi = .41$. Not surprisingly, given the absence of deadly weapons in wrestling, no interactions depict extreme harm as an outcome. This differs significantly from the NTVS prime-time shows, $\chi^2(1, N = 2,624) = 141.49, p < .001, \phi = .23$, where 23% of interactions depict extreme harm.

The likely harm variable also allowed us to determine how much unrealistic harm occurs in wrestling compared to the NTVS programs. Following NTVS procedures, this was calculated by counting the number of instances where likely harm exceeded depicted harm. The results showed that 16% of violent interactions in wrestling result in unrealistic harm, compared to 24% of violent interactions in NTVS prime-time programs—a difference that does not reach our criterion for practical significance.

A significant difference between the prime-time NTVS and wrestling samples was found for no depicted pain, $\chi^2(1, N = 2,603) = 161.87, p < .001, \phi = .25$. Close to half (44%) of the NTVS interactions portray no depicted pain, whereas only 12% do in wrestling. Instead, wrestling programs show victim pain significantly more often as mild (47% vs. 24% in NTVS shows), $\chi^2(1, N = 2,603) = 108.05, p < .001, \phi = .20$, or as moderate (22% vs. 11% in NTVS shows), $\chi^2(1, N = 2,603) = 41.78, p < .001, \phi = .13$. By contrast, the NTVS programs have significantly more interactions depicting extreme pain (13% vs. 1% in wrestling), $\chi^2(1, N = 2,603) = 59.06, p < .001, \phi = .15$.

Rewards and Punishments

Rewards and punishments in wrestling were also compared to the prime-time NTVS programs at the scene level. In terms of number of scenes, 16% of wrestling scenes and 23% of scenes in other prime-time programs contain rewarded violence, a difference that is not practically significant. Notably, however, wrestling contains significantly more violent scenes with no punishments (94%) than the general landscape of prime-time programming reported by the NTVS researchers (Wilson et al., 1997) (71%), $\chi^2(1, N = 1,667) = 44.99, p < .001, \phi = .16$.

Discussion

This content study lays a foundation for further research examining exposure to violence contained in wrestling and other sports. The findings support our expectation that wrestling content differs from other television violence along critical dimensions. We found striking differences when comparing the amount and context of violence in professional wrestling to the broad spectrum of television content. Although some differences show patterns theoretically associated with a reduced potential for harm, the picture emerging from these data suggests that wrestling presents violence in ways

likely to increase the risk of harm to vulnerable viewers. Overall, violence in wrestling is not only unremitting but is more likely to be portrayed as justified, unpunished, and lacking extreme harm.

When we ask how *much* violence occurs in professional wrestling, to nobody's surprise we find that it occurs in great quantity. After adjusting for commercial time (about 22 minutes per hour), professional wrestling contains nearly 22 violent interactions per hour. Even without this adjustment, wrestling contains more than twice the number of violent interactions found in the average NTVS program. A full 23% of these interactions fall into the "extreme" category, containing an average of 46 separate violent acts each. Clearly, a cascade of violence gushes into American living rooms during a typical wrestling telecast. If the amount of violence portrayed is central to the internalization of aggressive thoughts, wrestling stands out as a paragon of problematic content. Still, although not diminishing its importance, our investigation's main focus is not only on frequency but also on the contextual features associated with these violent portrayals. Perhaps the most striking differences that emerge here involve the reasons for violence in professional wrestling—particularly those associated with the mandate for violence. Our addition of mandated violence to the NTVS scheme focuses attention not only on a feature that distinguishes violence in sports from other media genres but might also distinguish wrestling violence from violence in other sports. Two important observations occur here.

First, finding that 58% of the violence in professional wrestling is mandated forces us to realize that most wrestling violence has different motives than the violence in other TV genres. Although there might be rare cases elsewhere, it is hard to think of other settings in which violence is not just accepted but expected and even required by rule—where somebody says, "Come on now, you need to hit him." Normative sanctions for mandated sport violence vaguely resemble public acceptance for police and military violence motivated by "protection of life," whereas mandated violence in wrestling, or other sports such as football and boxing, is clearly distinct and deserving of separate study. The importance of this distinction should not be overlooked. Does the mandate for violence in wrestling mean that viewers perceive it as justified? If so, do these perceptions reduce inhibitions against aggressive behavior, as suggested by research on justified media violence (Berkowitz, 1962)? These are questions of serious consequence.

Second, observing that over 40% of the violence in professional wrestling is nonmandated tells us that professional wrestling contains many acts of violence beyond the type normally categorized as "sports violence." In general we might be able to explain the surprising scarcity of research on mediated sports violence as resulting from a belief, rightly or wrongly, that sports violence is somehow less problematic than other forms of media violence. However, evidence that an average hour of professional wrestling includes nearly 6 nonmandated violent interactions and over 33 individual violent acts challenges this belief and suggests that we should not label professional wrestling as just another example of sports violence. It should be included more broadly in research on media violence. A backstage attack by an angry

wrestler is not contextually the same as a violent block in football or even a left jab in boxing. The diverse nature of motives for violence in wrestling highlights its centrality to fundamental issues of media violence research.

NTVS researchers (Wilson et al., 1997) make special note of rewards for perpetrators and observe that prime-time violence went unpunished in 71% of the scenes sampled. They suggest that televised violence presented without punishment fosters beliefs that promote violent behavior and warn of the harm likely to result from this type of portrayal. If this potential for harm exists in other program genres, it seems even more likely for professional wrestling. Our data show that violence went unpunished in 94% of all scenes—an especially potent observation considering the large number of violent interactions and acts that occur within these scenes.

NTVS also identifies the portrayal of consequence to victims of violence as a particularly important contextual feature. A quick glance at our findings might hint that wrestling is less problematic than other programming in this regard; however, closer inspection leaves this issue in question. The percentage of cues showing mild pain and harm to victims is greater in wrestling than in NTVS programs, in which no pain or harm is the norm. However, cues of extreme pain and harm are notably rare in professional wrestling and more frequent in NTVS programs. Presumably, professional wrestling requires at least mild pain cues so that “staged” violence will seem real to audiences. At the same time, the absence of extreme harm is important. Although showing some form of harm and pain might serve to inhibit imitative behavior (e.g., Baron, 1971), the absence of severe observable harm in wrestling could work against this.

Another important contextual difference stems from the fact that wrestling’s use of natural violence as a means of aggression curtails the frequent portrayal of conventional weapons common in other media violence. The absence of guns and knives as a means of aggression in wrestling should inhibit the type of weapons-based primes believed to instigate aggressive thoughts and acts through neoassociationistic channels (Berkowitz, 1990). Still, even the weaponless forms of violence in wrestling are not without possible risk. Although guns and knives may prime aggressive thoughts, the high-risk moves in professional wrestling are easily imitated, which many children report doing (Lemish, 1997). Tragic examples of this can be seen in the wrestling-related fatalities of a 6-year-old in Florida (Canedy, 2001) and a 9-year-old in North Carolina (as cited in Parents Television Council, 2001), both killed by other adolescents imitating professional wrestling. Beyond known fatalities, there are many observed cases of injury (“Backyard Wrestling,” 2001; Dube, 2000).

Our study begins to look more closely at the portrayal of violence in televised professional wrestling; however, questions about this content and its potential effect remain. These concerns are heightened by research indicating that younger audiences are more likely to perceive fictional or dramatized presentations as realistic. Children under the age of 5 seldom demonstrate the capacity to differentiate between fantasy and reality (Morison & Gardiner, 1978) and are prone to accept visual depictions as real simply because they are on television (Hawkins, 1977). Although older children

and adolescents begin to look for cues and context implying realism (Dorr, 1983), there is evidence that they still do not completely understand the fantasy–reality distinction. Children in as high as 10th grade consider television characters as not dissimilar to people in real life (Lyle & Hoffman, 1972), and some 8th graders rate violent presentations as lifelike and acceptable (Greenberg & Gordon, 1972). Given the inability of young audiences to distinguish fantasy from reality, the extreme levels of violence found in professional wrestling, its justified contexts with minimal consequences, and the genre’s popularity with young audiences, detailed examination of professional wrestling violence and its potential impact seems obligatory.

This study lays groundwork for future research examining how the unique features of wrestling violence might shape its impact on viewers. The systematic study of features found here can help clarify our understanding of professional wrestling violence as well as other televised genres containing contextually similar forms.

Although little research examines exposure to wrestling, indications of the risk to viewers can be seen in research demonstrating that exposure to professional wrestling provokes negative mood in its viewers (Depalma & Raney, 2003). When combined with our study’s account of wrestling’s contextual features related to hostility, greater attention to professional wrestling’s potential for harmful outcomes is called for. Beyond this, greater attention to the array of sports violence also seems warranted. Depalma and Raney noted that research on “sports violence” fails to distinguish violence in terms of features like motive, associated rewards, graphicness, and realism—all contextual features known to moderate the effect of exposure.

The few studies examining televised sports violence link exposure to aggression. Research shows that exposure to violent sports can increase aggressive mood and behavior among angered people (Russell, di Lullo, & di Lullo, 1988), that viewing contact sports predicts men’s sexual aggression toward women (Brown, Sumner, & Nocera, 2002), and that televised boxing predicts heightened national homicide rates (Phillips, 1983). Yet this research is scattered and without a coherent model identifying features of sports violence that moderate its impact. Systematic study of those features that distinguish sports violence offers a sound approach to addressing this issue.

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