

A review of the sociological and anthropological studies of bullfighting defines this as a class of celebration in which the bull is sacrificed by the bullfighter [De Solis, 1992]. For De Solis [op. cit.], the behavior of the audience at a classical bullfight differs from public behavior exhibited at other entertainment or sporting events, such as soccer games or boxing matches. The main difference is thought to relate to the origin of the national fiesta (an activity dating back to the beginnings of the Mediterranean culture) as a historic form of sacrifice. Anthropologically, various authors have speculated about the cultural mechanisms that are most important in the social-cultural analysis of bullfighting. Driesen [1982] centers on *ritualization*, or the set of rules (norms) adopted at each ceremony. Bullfighting is viewed as a ritual symbolic sacrifice. Pitt-Rivers [1993] suggests this ritualized sacrifice represents fertility, stability, firmness and constancy, virility, value, and nobility. The popular tradition reinforces in the spectators attitudes of respect and admiration for the bullfighter as he demonstrates his bravery and skill [Coppock, 1997].

In the Spanish culture, however, terms such as “aggression” and/or “violence” are commonly applied to some sporting events or cultural festivities, i.e., boxing matches and bullfighting. In order to study the psychological repercussions of viewing the aggressive and/or violent content of bullfighting, it is important to first define this concept. The aggression produced by a bullfight can be defined as instrumental aggressive behavior, as it receives strong social endorsement and is viewed as appropriate and tolerable in the Spanish social environment.

Viewing violent scenes has a greater impact on behavior in children compared to adults. Viemerö [1986] and Viemerö et al. [1998] have shown that the viewing of violent scenes has a greater effect up to 19 years of age than in adults. Girls seem to be able to distinguish better between reality and fiction. Boys tend to interpret what they see in terms of what might be possible or expected, identifying more easily with aggressive characters [Huesmann, 1986; Huesmann et al., 1998]. The moral justification of violent scenes also plays an interesting role in the final behavior of the spectator. The more one tries to morally justify the action, the greater social expectations in this regard, and the more acceptable the resulting behavior [Ramírez, 1991, 1993]. Normative beliefs (individual beliefs about what behaviors are appropriate in specific situations) help one to discriminate the relationship between viewing violent scenes and actual acts of aggression [Huesmann et al., 1996]. However, observing violent scenes increases the tolerance of displays of aggression and teaches the observers to increase their levels of acceptable aggression [Drabman et al. 1977; Drabman and Thomas, 1975; Molitor and Hirsch, 1994; Watt and Krull, 1977].

Context influences the justification of behavior. Peña et al. [1999] indicated that the observation of violent scenes has a significant effect on verbal aggressiveness and the physical expression of aggression. Berkowitz and Powers [1979] have also shown that, depending on the content of violent scenes observed, actions that could be justified significantly increased both verbal and physical aggression in subjects. Bullfighting produces a type of aggression that has strong social support in Spanish society. Social norms consider such behavior appropriate and tolerable, even though it has as its consequence the lesion, harm, and death of an animal. Many factors seem to significantly modulate the relationship between viewing aggressive and/or violent scenes in which a person or animal is physically or mentally harmed, and the psychic repercussions that can result from such observation. Age, sex, personality, moral appraisal, identification with the person or animal being hurt, as well as interpretation that what is occurring as something real and/or brutal, are the main factors that help to empirically identify the true effects that result from observing violence.

The following study was designed with two objectives: (1) to determine the attitudes of children under the age of 14 of both sexes to bullfighting, and (2) to investigate the psychological impact of viewing such an event. The influence of viewing videos of bullfights is analyzed by age, sex and cognitive appraisal.

METHOD

Subjects

The sample was composed of 240 subjects (120 girls and 120 boys) aged between eight and twelve years. Subjects were randomly selected from three elementary/secondary schools with district socio-economic levels taken into account: *San Lu s Gonzaga* School in Majadahonda (private school), *Felipe IV* School in Navalcarnero (public school) and *Montserrat* School in downtown Madrid (a combination of public-private school).

Instruments

The authors obtained a ten-minute video (standard VHS format) depicting a televised bullfight from beginning to end. Technicians in the Editing Room of the School of Psychology at the Complutense University of Madrid, combined the video (Text 1) with particular narratives to create two additional films (Text 2 and Text 3). Figures 1, 2, and 3 reproduce the text used to explain what was occurring during the scenes. Text 1 included the neutral description of the bullfight (control group). Text 2 was based on the festive description of the tradition and Text 3 described the aggressiveness of the fight. Music, a double-step bullfighting tune, was added to each film to homogenize the three versions of the video.

The following instruments were selected based on a pilot study determining the most appropriate self-informing materials for the young sample population. They were:

- a) The "Opinion of Bullfighting" Questionnaire, designed by the authors to assess the child's general opinion of bullfighting.
 - b) The Aggression Questionnaire [Buss and Perry, 1992], designed and adapted to the Spanish population by the authors [Andreu et al., 2002], with the principal objective of evaluating the levels of self-observed aggression in the children.
 - c) The State/Trait Anxiety Inventory for Children [Spielberger, 1990], with the objective of evaluating the anxiety of the children as a transitional state and a latent characteristic, and
 - d) The Event Impact Scale, designed by the authors with the objective of determining the degree of psychological impact on the children after viewing the video.
- All data were analyzed utilizing the SPSS (v. 10.0.1S) package.

Experimental Design and Procedure

A factorial three design, 3 (variations of the video) \times 2 (age) \times 2 (sex), was used creating 12 possible experimental groups to which the 240 subjects were randomly assigned. In each of the groups, the subjects first filled out the Opinion of Bullfighting questionnaire. They observed the 10-minute video corresponding to their experimental group; afterwards they filled out the remaining questionnaires.

The examiner and the instructions given to each group were constant. The instructions were: "*In just a moment, you will sit down in your seat and fill out the first questionnaire. After*

Today is a normal day for the observers of the national fiesta. The bullring workers have prepared the bullring and the bull to express the behaviors that are part of this event. The crowds fill all the seats in the arena. They have returned to see the event they enjoy – the art of bullfighting.

Ah, there it is! The bullring. The public waits for the start of the anticipated fun. The sound of the cornets signal that the fiesta is about to officially begin! There he is, restless but prepared with his red and yellow bullfighting cape and mentally ready to give his best and provide what a day of national fiesta deserves. He is dressed in his typical clothes – the bullfighting suit decorated with gold - along with his special boots and a bullfighter's typical hat. There he stands waiting for his faithful companion the bull to leave his pen.

And there is the bull, whose name is Huron. What a ferocious, brave, and noble animal! It was carefully cared for to prepare for its participation in this event and now it wants to be able to finally do it. The bullfighter begins to wave his cape signaling the first pass. He demonstrates his mastery in bullfight.

At the end of the first part of the fight, the public applauds. This leads to the next, and one of the most typical moments of the fiesta – the lancing stage of the fight. The goaders proudly enter the arena, also prepared to contribute to the event on this day. The bullfighter agitates the bull with the wave of his cape, trying to guide the animal closer to the horse atop which the goader awaits. And now the bull charges the horse and receives a blow from the goader's dagger. The bull is able to withstand the blows.

The bullfighter returns to the spotlight, waving his cape and giving color and life to the event. The public applauds his skills. A group of men enter the arena, each armed with his hooked dagger. Dressed in his black suit, one steps forward to show his bravery. He walks up to the bull and places his hook in the animal's body with precision. The rest of the group follows his lead, each hook bringing more excitement to the bullfight.

And now the bullfighter dedicates the bull to the public and receives a standing ovation. He receives the bull on his knees, an expression of decision that demonstrates the art of bullfighting.

Both the bull and bullfighter are prepared for the end on the fight, one of the principal moments of the event. The bullfighter, with his sword of steel, fixes a calm, secure stare on the bull. The audience cheers for his successful thrust and hook. The bull is directed toward the boards and the public demands the reward for such a bullfighter that finalizes the celebration.

Figure 1. Neutral narration of the bullfight (Text 1).

that you will watch a video of a bullfight that will last about 10 minutes. After the film, you should fill out the other questionnaires. Please answer all of the questions as sincerely as possible. There are no right or wrong answers because we are interested in knowing your feelings and opinions. Remember that the questionnaires are completely anonymous, without your name, and will only serve as general information for a later study. If you have any problems, please do not ask your classmates. Instead raise your hand and the examiner will help you."

RESULTS

The results presented here are divided into three sections: A) the children's general opinions of bullfights, B) the psychometric reliability indexes of the various questionnaires utilized in the study to measure aggression, anxiety, and emotional impact, and C) the results obtained based on the experimental design.

A) General Opinion of Children Between 9 and 12 With Respect to Bullfighting

Table I represents the descriptive statistics (frequencies and percentages) for the most important items of the General Questionnaire as well as the χ^2 statistic to determine the significant differences in the subjects' responses. As seen in Table I, all of the children who reported that they have frequently viewed bullfights said they did so because they enjoyed this type of show, while 67.5% of the children who sometimes attended bullfights cite this reason ($\chi^2 = 65.72$, $p < .001$). Half of the children who frequently or sometimes attend bullfights often watch these shows on television ($\chi^2 = 37.70$, $p < .001$).

Today is a special day for the lovers of this national fiesta. The bullring workers have prepared the bullring and the bull to express the deep feelings that are part of this exciting event. The crowds fill all the seats in the arena. They are happy because they have returned to see the event they enjoy the most – the noble art of bullfighting.

Ah, there it is! The bullring. The public impatiently waits for the start of the anticipated fun... The sound of the cornets signal that the fiesta is about to officially begin! There he is, restless but prepared with his red and yellow bullfighting cape and mentally ready to give his best and provide what a day of national fiesta deserves – a glorious afternoon. He is dressed in his best clothes – the bullfighting suit decorated with gold - along with his special boots and a bullfighter’s typical hat. There he stands waiting for his faithful companion the bull to leave his pen.

And there is the bull, whose name is Huron. What a ferocious, brave, and noble animal! It was carefully cared for to prepare for its participation in this event and now it wants to be able to finally do it. The bullfighter begins to wave his cape signaling the first pass. He demonstrates his mastery for all to admire, while the bull fights harder and harder.

At the end of the first part of the fight, the public applauds. This leads to the next, and one of the most important, moments of the fiesta – the lancing stage of the fight. The goaders proudly enter the arena, also prepared to contribute to the greatness of the event on this special day. The bullfighter agitates the bull with the wave of his cape, trying to guide the animal closer to the horse atop which the goader awaits. And now the bull charges the horse and receives a blow from the goader’s dagger. What a nice hit! The bull is able to withstand the blows because he is strong, brave, and prepared for these actions.

The bullfighter returns to the spotlight, waving his cape and giving color and life to the event. The public applauds his skills and dominance of the ferocious animal and waits for the third part of the fight. A group of men enter the arena, each armed with his hooked dagger. Dressed in his black suit, one steps forward to show his bravery. He walks up to the bull and places his hook in the animal’s body with precision and admirable talent. Very good! That’s how it’s done! The rest of the group follows his lead, each hook bringing more excitement to the bullfight. These moments cause the spectators to praise the bull for his courage, bravery, and strength.

And now the bullfighter dedicates the bull to the public and receives a standing ovation. He receives the bull on his knees, an expression of courage and decision that demonstrates the beauty of the art of bullfighting.

Both the bull and bullfighter are prepared for the end on the fight, one of the most interesting moments of the event. The bullfighter, with his sword of steel, fixes a calm, secure stare on the bull that waits for his destiny. Congratulations! You’ve done it – the perfect stab! The audience cheers wildly for his successful thrust and hook. The bull is directed toward the boards and the public demands the maximum reward for such a brave bullfighter that finalizes the proud celebration that plays important role in this day of national fiesta.

Figure 2. Festive narration of the bullfight (Text 2).

There were children who hadn’t ever attended a bullfight, those who had gone only a few times, and even some who frequently went to see bullfights who reported that, in general, they felt it constituted a violent show ($\chi^2 = 1.65$, n.s.). In 69% of the cases, there were no significant differences between groups. Whether they attended bullfights or not, children from all groups tended to agree that the shows were culturally acceptable ($\chi^2 = 3.05$, n.s.).

In terms of the children’s feelings while watching a bullfight, 56.3% of those who frequently attended reported indifference, while only 35.1% of those who had never gone described this feeling ($\chi^2 = 29.79$, $p < .001$). The children who frequently attended and those who had never attended a bullfight thought that watching these shows was acceptable (30.1% vs. 17.5% vs. 12.5%, $\chi^2 = 5.61$, ns).

B) Reliability Indices of the Questionnaires

Aggression Questionnaire “AQ”. This questionnaire is a version of the Aggression Questionnaire “AQ” adapted for the child population by Buss and Perry [1992]. It is derived from one of the most used questionnaires in the study of aggression – The Hostility Inventory

Today is another day of what many call a national fiesta. The bullring workers have prepared the bullring and the bull to express the bad, unpleasant feelings that are part of this violent event. The crowds fill all the seats in the arena anxious and upset because they have returned to see the event they like the most – the cruel art of bullfighting.

Ah, there it is! The bullring. The public impatiently waits for the start of the anticipated gore... The sound of the cornets signal that the sad fight is about to officially begin! There he is, restless but prepared with his red and yellow bullfighting cape and mentally ready to take the life of an animal on this day of supposed national fiesta. He is dressed in his bullfighting suit, boots and hat, all symbols of his power over the bull. There he stands waiting for his enemy the bull to leave his pen.

And there is the bull. What a ferocious, brave, and noble animal! Its strength has been artificially created outside of its natural environment which prepares its participation in this event. The bullfighter begins to wave his cape signaling the first pass. He shows his skill taunting the bull and bringing out the aggressive and violent side of the animal.

At the end of the first part of the fight, the public applauds wildly. This leads to the next, and one of the most unpleasant, moments of this violent fiesta – the lancing stage of the fight. The goaders proudly enter the arena because they are going to use their weapons against the defenseless animal, expressing the violence of this event. The bullfighter agitates the bull with the wave of his cape, obliging the bull closer and closer to the horse atop which the goader awaits. Even though his eyes are covered, the horse is very nervous. It knows it is going to receive a tremendous blow from the bull, but because it cannot see when the bull begins to charge, it does not know when the strike is going to come. The bull charges the confused horse and receives a cruel blow from the goader's dagger. The goader has gathered all his strength to give that cruel and surprising hit. The bull is hurting and disoriented. It tries to escape as quickly as possible so it will not have to defenselessly face more of these violent acts.

The bullfighter returns to the center of the arena, waving his cape and trying to further confuse the poor animal left all alone. Sadly, the public applauds his skills and dominance of the bull without thinking about the harm caused to the defenseless animal that runs to save itself from this cruel event. A group of men enter the arena, each armed with his hooked dagger. One tries to demonstrate his bravery by thrusting his weapons into the animal that has no resources to fight back. He's done it! The rest of the group follows his lead, each lancing their hooks into the bull's body three times. This is another of the saddest moments of the event because the bull cries defenselessly as a result of these horrendous deeds.

And now the bullfighter dedicates the bull to the public and receives a standing ovation for his display of aggressive behavior. He receives the bull on his knees, challenging the animal frightened by the waving cape and roar of the spectators.

Both the bull and bullfighter are prepared for the end on the fight. The bullfighter, with his sharp sword, dizzies and confuses the bull. They pass into one of the most violent and aggressive moments of this so-called fiesta. The bullfighter fixes a secure stare on the bull that is very frightened and can do no more but wait for its sad destiny. He's done it – a direct stab into the animal's flesh! The audience, hot and aggressive, applauds the death of the bull. The bull is directed toward the boards hurt and defenseless begging the men to let it die without further abuse. The violent public demands the sad reward for the bullfighter – the bull's ear. The brave bullfighter then demonstrates his courage in front of the death animal bringing to a close the aggressive bullfight on this day of national fiesta.

Figure 3. Aggressive narrative of the bullfight (Text 3).

by Buss and Durkee [1957] – and consists of 29 items with a Likert scale of five points and four sub-scales of physical aggression, verbal aggression, anger and hostility. In samples of North American students, the reliability coefficient was determined to be 0.80. In samples of Spanish students in secondary school, trade school, and college, the reliability coefficient obtained was 0.87 [Andreu et al., 1999, 2002]. In the present study the general aggression levels for the subjects are reported based on their total scores on the aggression questionnaire. The reliability coefficient of the AQ estimated through the Cronbach's *Alpha* Coefficient was 0.84, indicating that the general aggression levels of the children were accurately measured.

State/Trait Anxiety Inventory for Children (STAIC). This questionnaire was adapted for Spanish children and adolescents by Seisdedos [1990]. It consists of two parts

TABLE I. General Opinion of Children About Bullfighting

		How often do you normally attend a bullfight?		
		Never	Sometimes	Frequently
Do you like bullfighting?	Yes (43%)	29 (21.6%)	54 (67.5%)	16 (100%)
	No (57%)	105 (78.4%)	26 (32.5%)	
How often do you watch a bullfight on television?	Never (29.3%)	53 (39.3%)	15 (18.5%)	
	Sometimes (58.6%)	74 (54.8%)	54 (66.7%)	8 (50%)
	Frequently (12.1%)	8 (5.9%)	12 (14.8%)	8 (50%)
Do you consider bullfighting a violent event?	Yes (65.1%)	91 (67.9%)	47 (59.9%)	11 (68.8%)
	No (34.9%)	43 (32.1%)	32 (40.5%)	5 (31.3%)
Do you think it's OK for children your age to watch a bullfight?	Yes (65.6%)	81 (60.9%)	58 (72.5%)	11 (68.8%)
	No (34.5%)	523 (39.1%)	22 (27.5%)	5 (31.3%)
How do you feel when watching a bullfight?	Happiness (10.4%)	3 (2.2%)	17 (21%)	4 (25%)
	Grief (52.8%)	84 (62.7%)	35 (43.2%)	3 (18.8%)
	Indifference (36.8%)	47 (35.1%)	29 (35.8%)	9 (56.3%)
What do you think when watching a bullfight?	That it is OK (13%)	4 (3%)	22 (27.5%)	4 (25%)
	That it is bad (58.3%)	88 (65.7%)	39 (48.8%)	7 (43.8%)
	Nothing special (28.7%)	42 (31.3%)	19 (23.8%)	5 (31.3%)
Do you think it's wrong for children to watch bullfights?	Yes (24.5%)	40 (30.1%)	14 (17.5%)	2 (12.5%)
	No (75.5%)	93 (69.9%)	66 (82.5%)	14 (87.5%)

of 20 items through which anxiety-state levels (“the level of anxiety felt in a given moment”) and anxiety-trait levels (“the level of anxiety felt in general”) are measured. The reliability coefficients found in the Spanish sample composed of 1,013 subjects between the ages of nine and fifteen were 0.89 for the first scale and 0.85 for the second using the alpha method, and 0.91 and 0.87 with the K-R method for the first and second scales respectively [Seisdedos, 1990].

Event Impact Scale (ESI). This scale was designed by the authors to define the degree of psychological impact on the children after observing one of the bullfighting videos. It consists of 10 items with a Likert Scale of one to four that reflects the degree of psychological impact of negative events. The reliability coefficient obtained for this scale through the Cronbach's *Alpha* Coefficient was 0.54. Although it was weak, the coefficient is high enough to be considered valid for a measuring instrument of only 10 items.

Finally, Table II presents the correlations between all of the scales in order to assess the relationships between each of the psychological measurements evaluated in the subjects. All of the variables were positive and significantly correlated among themselves.

TABLE II. Correlations Between the Various Self-Evaluations

		State Anxiety	Trait Anxiety	Aggression	Impact
State Anxiety	Pearson Correlation	1.000	.322	.264	.195
	Sig. (bilateral)		.000	.000	.002
	N	240	240	240	240
Trait Anxiety	Pearson Correlation	.322**	1.000	.359	.413
	Sig. (bilateral)	.000		.000	.000
	N	240	240	240	240
Aggression	Pearson Correlation	.264**	.359**	1.000	.349
	Sig. (bilateral)	.000	0		.000
	N	240	240	240	240
Impact	Pearson Correlation	.195**	.413**	.349**	1.000
	Sig. (bilateral)	.002	.000	.000	
	N	240	240	240	240

**The correlation is significant at the 0.01 level (bilateral).

C) Influence of the Type of Bullfighting Narration on Aggression, Anxiety, and Emotion.

The following results examine how the type of narration for the bullfighting event (neutral, festive, and aggressive), sex (male or female), and age (9 or 12) influenced the levels of aggression, anxiety, and emotional impact of the subjects after viewing the bullfighting video. First, a MANOVA was carried out to test the influence of the type of justification (neutral, festive and aggressive), age, and sex on the three psychological measurements analyzed collectively. The result showed a significant multi-variant effect for the type of justification ($F_{8,452} = 6.05$, $p < .001$), the sex ($F_{4,225} = 4.55$, $p < .001$) and the age of the subjects ($F_{4,225} = 2.96$, $p = .05$).

Second, to determine the specific influence of each one of the psychological factors considered, successive ANOVAS were carried out based on the results of the MANOVA. The trait-anxiety variable was defined as a co-variable in order to eliminate the possible contamination of the levels of state anxiety present in the subjects after watching the bullfighting video.

1) Analysis of the Aggression Levels of the Subjects

Table III presents the effect of the type of narration, age and sex on the aggression levels of the subjects after viewing one of the three videos of the bullfighting event. A significant effect was found between the sex of the subject and type of justification, as well as significant interaction effects between both factors combined with the age of the subject. More specific results include:

- a) Boys showed a higher general aggression level than girls (2.65 vs. 2.52, $t = 4.23$, $p < .05$).
- b) The group viewing the bullfight with the festive explanation (Text 2) showed significantly higher aggression scores than counterparts viewing the control video (2.71 vs. 2.43, $t = 3.01$, $p < .005$).
- c) The interaction between sex \times video showed that:
 - For boys, observing the bullfighting with the festive narration (Text 2) resulted in more aggression than with the control video (without narrative) (2.86 vs. 2.38, $t = 4.16$, $p < .001$). Observing the bullfight with aggressive narration (Text 3) also produced more aggression than

TABLE III. Effect of the Type of Justification, Age and Sex on Aggression Levels

Source	Sum of Squares	df	Square Average	F	p
Corrected model	8.339	11	.758	2.964	.001
Intersection	1,612.017	1	1,612.017	6,301.790	.000
SEX	1.084	1	1.084	4.236	.041*
AGE	3978	1	3	.002	.969
VIDEO	3.097	2	1.548	6.053	.003**
SEX * AGE	508	1	584	.199	.656
SEX * VIDEO	1.881	2	.941	3.677	.027*
AGE * VIDEO	5,943	2	2,971	.116	.890
SEX * AGE * VIDEO	2.167	2	1.084	4.236	.016*
Error	58.323	228	.256		
Total	1,678.679	240			
Corrected Total	66.662	239			

* Significant differences with $p < .05$

** Significant differences with $p < .005$.

with the neutral video (2.72 vs. 2.38, $t = 3.02$, $p < .005$). There were no significant differences in aggression levels between those observing the bullfight with festive and aggressive narration (2.86 vs. 2.72, $t = 1.18$, ns). For girls there were no significant differences between the experimental groups.

- Boys showed higher aggression levels than girls when using the festive justification (Text 2) of the bullfight (2.86 vs. 2.52, $t = 2.67$, $p < .01$).

- Boys showed higher aggression levels than girls when using the aggressive justification (Text 3) of the bullfight, (2.72 vs. 2.52, $t = 1.96$, $p = .05$).

- There were no significant differences between males and females when using the neutral bullfight video (Text 1)(2.38 vs. 2.49, $t = -.907$, ns).

d) The interaction between sex \times age \times video showed:

- Nine-year-old boys, observing the bullfight with festive narration produced more aggression than viewing the neutral video (2.94 vs. 2.21, $t = 5.42$, $p < .001$). Observing the bullfight with aggressive justification also produced more aggression than viewing the neutral video (2.76 vs. 2.21, $t = 3.55$, $p < .001$).

- Twelve -year-old boys, showed no significant differences between the experimental groups.

- Neither 9- nor 12-year-old girls, showed significant differences between the experimental groups.

- In addition when viewing the control video, nine-year-old boys showed lower aggression scores than 12-year-old boys (2.21 vs. 2.55, $t = -2.15$, $p < .05$), and nine-year-old girls showed more aggression than nine-year-old boys viewing the same film (2.21 vs. 2.61, $t = -2.48$, $p < .05$). When viewing the bullfight with the festive justification (Text 2), nine-year-old boys showed higher aggression levels than nine-year-old girls viewing the same film (2.94 vs. 2.50, $t = 3.03$, $p < .005$).

2) Analysis of the Anxiety Levels of the Subjects

Table IV shows the independent significant effects of sex, age, and type of narrations of bullfighting on the state-anxiety levels of the subjects. Because the state-anxiety levels were

TABLE IV. Effect of the Type of Justification, Age, and Sex on Anxiety Levels

Source	Sum of Squares	df	Square Average	F	p
Corrected Model	2,619,278	12	218,273	5,676	,000
Intersection	3,744,906	1	3744,906	97,377	,000
Trait Anxiety	715,210	1	715,210	18,597	,000
AGE	175,495	1	175,495	4,563	,034*
SEX	142,890	1	142,890	3715	,055*
VIDEO	860,351	2	430,175	11,186	,000**
AGE * SEX	2,993E-04	1	2,993E-04	,000	,998
AGE * VIDEO	61,306	2	30,653	,797	,452
SEX * VIDEO	42,224	2	21,112	,549	,578
AGE * SEX * VIDEO	165,300	2	82,650	2,149	,119
Error	8,729,908	227	38,458		
Total	243,896,368	240			
Corrected Total	11,349,186	239			

* Significant differences with $p < .05$

** Significant differences with $p < .001$.

initially influenced by the trait-anxiety levels, it was necessary to control the trait-anxiety levels through ANCOVA procedures. Consequently, the levels presented in this study are adjusted based on the co-variable model with the following effects: a) Nine-year-old subjects presented less anxiety than the 12-year-olds (30.26 vs. 31.99, $t = 4.563$, $p < .05$); b) Boys presented less anxiety than girls (30.35 vs. 31.90, $t = 3.71$, $p < .05$); c) Observing the festive narration produced more anxiety than either the aggressive or neutral narrations (33.55 vs. 30.96, $t = 2.89$, $p < .05$ / 33.55 vs. 28.86, $t = 3.01$, $p < .001$). There were no significant differences between the festive and aggressive bullfighting scenes (33.55 vs. 30.96, ns).

3) Analysis of the Emotional Impact on the Children.

Table V presents the results founded relating to the emotional impact on the children. There was only one significant effect. Observing the bullfight with aggressive narration produced higher scores of psychological impact than viewing the neutral video (2.37 vs. 2.10, $p < .005$). The festive narration produced no significant differences from the other two narrations (2.20 vs. 2.37, ns / 2.20 vs. 2.10, ns).

DISCUSSION

In the descriptive study carried out regarding youth attitudes towards bullfighting, over half of the children surveyed claimed not to like the events. Half of the sample admitted having seen a bullfight on television. Two-thirds considered the event a violent one. Despite this opinion, the majority of those surveyed did not see any problems with children their age viewing a bullfight (the reliability of this information has been tested by inverting two of the questions on the general questionnaire) and 75% believe the experience to be positive when accompanied by an adult.

The children's opinions are divided regarding personal harm caused by viewing a bullfight – 49.6% felt it had a negative impact, whereas 50.4% do not feel any negative results. In appraising the event, 35% of the sample value all of the general elements of the bullfight, but

TABLE V. Effect of the Type of Justification, Age and Sex on Emotional Impact Levels

Source	Sum of Squares	df	Square Average	F	p
Corrected Model	5,284	11	,480	2,333	,010
Intersection	1188,278	1	1188,278	5771,315	,000
AGE	2661	1	2661	,129	,720
SEX	,236	1	,236	1,147	,285
VIDEO	3,052	2	1,526	7,410	,001**
AGE * SEX	,169	1	,169	,822	,366
AGE * VIDEO	,629	2	,314	1,527	,219
SEX * VIDEO	722	2	3511	,171	,843
AGE * SEX * VIDEO	1,102	2	,551	2,675	,071
Error	46,944	228	,206		
Total	1240,506	240			
Corrected Total	52,228	239			

** Significant differences with $p < .005$.

more specifically, the fight and bullfighter himself. The death of the bull was the least attractive part for the children (60%). Examining the cognitive and emotional appraisal of bullfighting, 52% of the youth feel grief when viewing the event, more than half think that no harm should be done to the animal, and a quarter of the sample consider bullfighting a clear example of animal abuse.

In spite of this the data in this study showed that the children's attitude toward bullfighting was not generally favorable. The majority did not like to watch the event. Most children did not attend bullfights and watched them occasionally on television. An important number of children considered the event as way of harming the animal, and felt grief when they observed the bullfight, especially upon the bull's death.

The above results, although difficult to explain, may be important. In addition to a lack of official reports of animal cruelty, perpetration of animal abuse is often a solitary, secretive activity, known only to the perpetrator. It is therefore often very difficult to obtain information about animal cruelty from sources other than the perpetrator, such as family, teachers, or significant others. Such lack of basic information concerning prevalence of animal cruelty makes it very difficult to determine the extent of the problem or the impact on children [Miller, 2001]. Despite lack of research in the area, cruelty to animals is often advocated as a warning sign of potential violence in individuals. The humane societies and animal welfare agencies report that "scientists and lawmakers are slowly beginning to acknowledge the humane movement's long-held position that society's treatment of animals is inseparable from its treatment of human beings" [Lockwood and Hodge, 1986].

The second study examined the influence of the type of justification given to the bullfight on anxiety levels, aggression, and the children's psyche (emotional impact). The results indicate that the justification of the event as festive, aggressive, or neutral significantly influences all three of the psychological measurements. The children who were exposed to the content of the festive justification (centered on the descriptive elements of the bullfight and ignoring its negative consequences) scored significantly higher on the aggression and anxiety tests than counterparts viewing the neutral video. Boys observing the festively justified scene also showed more elevated aggression levels than the girls (especially at nine years of age).

The aggressively justified bullfight (emphasizing negative or violent descriptions of the fight) caused greater negative emotional impact on children compared to counterparts viewing the neutral scene, which lacked some type of justification. In this case also, the nine-year-old boys scored higher on the aggression questionnaire than the girls. The main conclusion is that the verbal messages that accompany the viewing of a bullfight have significant consequences on the aggression, anxiety, and emotional impact levels of young viewers. Festive descriptions produce more aggression and anxiety, while narrations emphasizing the aggressive aspects of the fight have more emotional impact.

This study also reveals the importance of modulating variables, such as age and sex of the viewer. The effects of observing a bullfight were consistently greater in young boys. The data coincide with claims by other authors that there is a period around nine years of age in which children are most sensitive to the effects of violent scenes. At this age, the impact is much higher for boys, who are especially likely to more easily identify with the aggressive characters in such a scene [Huesmann et al., 1998; Viemerö, 1986; Viemerö et al., 1998]. The impact of aggressive scenes is greater in children who present lower levels of aggression, and again boys are more vulnerable to the effects of the violent or aggressive content of such scenes [Viemerö 1986; Zillman, 1993]. Moreover, as the degree of justification of the aggressive display increases, so does the child's tolerance of such behavior, thus increasing his level of acceptable aggression [Drabman and Thomas, 1975; Drabman et al., 1977; Peña et al., 1999; Ramirez, 1991, 1993; Ramirez et al., 2001].

Finally, these results are also in line with other studies demonstrating that the psychological effects on children of viewing aggressive scenes is mediated by the cognitive interpretation of such behavior, rather than the violence itself [Feshbach and Singer, 1971; Huesmann, 1986; Huesmann et al., 1996]. These data are similar to those obtained by Echeburúa [1998] in relation to the effects on Spanish children of viewing bullfights. The main conclusion of this study supports Bandura's hypothesis [1989] that one of the most important factors in determining appropriate behavior is the cognitive evaluation of the occurrence.

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