Hockey Violence: A Test of Cultural Spillover Theory

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Cultural spillover theory holds that the more a society tends to legitimate the use of violence to attain ends for which there is widespread social approval, the greater the likelihood of illegitimate violence. This study was a test of cultural spillover theory as it applies to hockey violence. Based on data from a representative sample survey of Toronto hockey players and a comparison group of nonplayers, we tested the proposition that violence in hockey "spills over" into violence in other social settings. The results offer support for a cultural spillover explanation of hockey violence. Older players in highly competitive select-leagues were more likely to approve of violence and to act violently in other social settings than were younger select-league players, house-league players, and nonplayers of all ages.

Le théorie du débordement soutient que plus une société tend à légitimer l’usage de la violence pour atteindre certaines fins pour lesquelles il existe une approbation sociale répandue, plus grande sont les chances qu’il existe une violence illégitime. Cette étude est un test de cette théorie appliquée à la violence au hockey. À partir d’une enquête sur un échantillon représentatif des joueurs de hockey de Toronto et d’un groupe de non-joueurs, nous avons testé la proposition suivante la violence au hockey déborde en violence dans d’autres cadres sociaux. Les résultats supportent l’idée d’un débordement culturel de la violence au hockey. Les joueurs plus âgés dans les ligue sélectives hautement compétitives avaient plus de propension à approuver la violence et à agir violemment dans d’autres cadres sociaux, que des joueurs plus jeunes dans des ligue sélectives et que les joueurs dans des ligue maison et les non-joueurs de tous ages.

Many empirical studies on hockey violence have been conducted since research in this area began approximately 2 decades ago (Colburn, 1985, 1986; Faulkner, 1974; McCarthy & Kelly, 1978; Smith, 1975, 1978, 1979a, 1979b; Vaz, 1977, 1979; Weinstein, Smith, & Wiesenthal, 1995; Widmeyer & Birch, 1979; Young, 1990). Surprisingly, however, researchers have paid little or no attention to one of the most frequently asked questions about hockey violence, namely, does it spill over into other social settings?

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After a short illness, Michael D. Smith died while this paper was under review. An internationally respected scholar, Mike was a pioneer in North American sports violence research and a key Canadian figure in domestic violence research. He was a friend, a colleague, and a mentor to many of us and he will be greatly missed. At the time of this study he was with the Exercise and Health Science Department at York University.
We address this question in the present paper. Using cultural spillover theory, an emerging theoretical perspective that incorporates elements of other established perspectives, including violent subculture and legitimation of violence theories, we test the proposition that hockey fighting “spills over” into two other social spheres, namely, other sports and the family.

The data for this research come from a representative sample survey carried out in the late 1970s of Toronto hockey players and a comparison group of nonplayers (Smith, 1979a). Although the data were collected almost 20 years ago, it is far from dated. First, violence remains a problem in hockey at almost all levels (Morra & Smith, 1996). Second, there is an opportunity to explore a new question of violence using an extensive data set heretofore ignored for this purpose.

Cultural Spillover Theory

Cultural spillover theory holds that the more a society tends to legitimize the use of violence to attain ends for which there is widespread social approval, such as crime control, the greater the likelihood of illegitimate violence, such as sexual assault. Put differently, socially approved forms of violence have a carryover effect to more forbidden forms of violence.

Empirical support for cultural spillover theory comes principally from a series of studies on rape conducted by Baron and his colleagues (Baron & Straus, 1987, 1989; Baron, Straus, & Jaffe, 1988). In the latest of these studies, Baron and Straus (1989) posit that rape levels should be highest in U.S. states where cultural norms approving many different kinds of violence are strongest. Baron and Straus constructed two indexes, the Legitimate Violence Index (LVX) and the Violence Approval Index (VAX), to measure levels of legitimate violence. Rape levels were based on FBI Uniform Crime Report data. The LVX, composed of 12 indicators, was designed to measure the extent to which each state has a noncriminal or socially approved involvement in violence. Indicators included violent magazine readership, laws permitting corporal punishment in schools, National Guard enrollment rates, and military expenditures. The second measure of cultural support for violence, the VAX, was made up of survey-based attitudes regarding the use of force and violence, and included attitudes regarding the purchase of handguns, the rights of police officers, and so forth. Controlling for percentage of males in the population, unemployment rate, and five other variables related to the rape rate, Baron and Straus found that the greater the cultural support for legitimate violence within states, as measured by the LVX and VAX, the higher the level of rape. Baron and Straus interpret this finding as supporting a cultural spillover theory of rape.

To date, no direct empirical test of cultural spillover theory as it applies to sports violence has been conducted. A few sociological examinations of violence in amateur and professional sport suggest a spillover effect, but none specify a mechanism whereby violence purportedly spills over (Phillips, 1983; Segrave, Moreau, & Hastad, 1985). In their study of minor hockey players in Quebec, for example, Segrave et al. (1985) found that young players reported significantly higher levels than nonplayers of delinquent violence outside the hockey setting. They speculate that this behavior resulted from the violence that regularly occurs within the minor hockey system, but they made no attempt to investigate how.
Hockey Violence

Only one attempt to measure the relationship between cultural support for violence and sports-related violent behavior appears to have been made. In an earlier analysis of data from the survey at hand, Smith (1979a) found that values and attitudes supportive of violence were poor predictors of minor hockey players' involvement in "street fights." Smith did not compare players and nonplayers with respect to street fights.

Research on Violence Approval

A substantial amount of sociological research on violence is associated with the concept of a violent subculture. Probably the most frequently cited rendition of violent subculture theory is that of Wolfgang and Ferracuti (1967). Violent subculture theory, in its generic form, focuses on subcultural norms and values that differ from those of the wider culture. In a violent subculture, for instance, encouragement of and rewards for violent behavior may be much greater.

An occupational subculture of violence is one version of violent subculture theory that can be applied to sport. An occupational subculture develops when workers adhere to a set of proviolence norms and values at least somewhat unique to their occupation. The violent behavior itself occurs only within the occupational setting. When Smith (1979a) tested this version of violent subculture theory, he found that older players in select-leagues resembling the occupation of professional hockey fought more and received more major penalties than younger, house-league boys and scored significantly higher on measures of values and norms supporting violent behavior.

Cultural spillover theory improves upon violent subculture theory in that spillover theory posits a measure of the cultural approval of violence, such as Baron and Straus' LVX, that is empirically distinct from the criminal violence it seeks to explain. Violent subculture theory merely infers such cultural support from high rates of violent crime.

Legitimation-of-violence theory has focused mainly on the impact of state-legitimated violence on levels of non-state-legitimated violence within and across different societies. More specifically, this theory predicts a positive relationship between war and other forms of violent aggression through the residual cultural acceptance of violence (Smith, 1983). Archer and Gartner (1976, 1984) have conducted the most comprehensive examination of this hypothesis to date. Comparing prewar and postwar rates of homicide and other crimes in 110 countries, they found higher postwar homicide rates in combatant as compared to noncombatant nations. This finding suggests that the approval of violence during war spills over, at least for a period of time, into an approval of violence in other spheres and leads to a short-term increase in homicide and other forms of illegitimate interpersonal violence.

On an interpersonal level, the legitimation-of-violence thesis predicts that individuals who approve of violence that is widely considered legitimate also approve of violence that is widely considered illegitimate and that this approval translates into violent behavior. With respect to hockey violence, the legitimation-of-violence thesis suggests that hockey players who approve of violence that is generally considered acceptable within the context of the game (e.g., fist fighting), may also approve of more illegitimate violence in other social settings (e.g., in bars) and behave accordingly.
The legitimation-of-violence thesis suggests that societal violence increases through the acceptance of cultural phenomena that encourage violent behavior. In this regard, it is similar to cultural spillover theory. However, in legitimation-of-violence theory, cultural approval again is inferred, whereas in cultural spillover theory it is measured; thus, the latter seems better developed.

Finally, there is a growing body of work pertaining to athlete violence against women (Curry, 1991; Fine, 1987; Melnick, 1992; Messner, 1990). Of importance was the finding that male locker room attitudes objectify and denigrate females, and in the worst cases, may promote rape (Curry, 1991). Along the same lines, Melnick noted that,

Male athletes are frequently beseeched by coaches, teammates, and peers to improve their manhood by being tough, aggressive, and dominating . . . It is possible that aggression on the playing field, sexist language and attitudes used in the locker room, and an inordinate need to prove one’s maleness can combine in complex ways to predispose some male athletes towards off-the-field hostility. (1992, p. 33)

The Present Study

This research constitutes a test of cultural spillover theory as it applies to hockey violence, with an emphasis on those elements that are shared with violent subculture and legitimation-of-violence theories. Although cultural spillover theory was constructed originally as a societal-level explanation, we have conceptualized it at the interpersonal level of analysis. Ultimately, it is individual hockey players who assault other players. Using data from a survey of minor hockey players and a comparison group of nonplayers, we test the hypothesis that hockey violence spills over into violence in other sports and into the family.

More specifically we hypothesize that, compared to nonplayers, hockey players are more likely to approve of fighting and more likely to fight in these nonhockey settings. Further, because previous research has shown that hockey violence varies significantly by age and level of competition, we hypothesize that older players and select-league players are more likely to approve of fighting and to fight off the ice than are their younger, house-league counterparts and nonplayers of all ages.

The present research advances earlier research in three ways. First, the present study includes a comparison of hockey players and nonplayers, taking age and level of competition into consideration. Second, it employs two previously unexplored measures of off-ice violent behavior. Third, the entire analysis is cast within the framework of cultural spillover theory, which we believe examines an important component of hockey fighting that, up until this point, has been ignored.

Methods

Sample and Interviews

Three populations of Toronto males, ages 12–21 years, were sampled: house-league hockey players, select-league hockey players, and a comparison
group of nonplayers. Generally, house-leagues are designed for less skilled players who prefer a more relaxed and less competitive atmosphere. The opposite is true of select-leagues, in which players must try out for the team and greater emphasis is placed on winning. Several of the select-leagues in the survey were among the most “professionalized” minor hockey organizations in Canada.

The frame for the hockey samples consisted of all players registered in the hockey organizations. First the players were stratified by age-graded playing division, then respondents were randomly selected from within each stratum. Using simple random sampling from the registration lists of the hockey organizations, 740 selections were made. Removing nonrespondents and players not eligible for the study, such as goalkeepers and players released, traded, injured, or for some other reason not playing at least half a season, resulted in a final sample of 604 players. A total of 98 hockey teams is represented in the sample.

The nonplayer sample was randomly selected from student registrations in six Toronto schools. A total of 180 nonplayers were sampled, with a final sample of 153 completing interviews.

Interviewers employed by the Institute for Social Research, located at York University, conducted face-to-face interviews with all players and nonplayers. The interviews averaged 50 minutes in length. Almost all took place in the respondents’ residences, with only the interviewer and respondent present.

**Measures**

The approval of violence measure was constructed by Smith (1979a) from a set of questions on the approval of teenage fighting. The first question asked if there were any situations, not counting sports, in which the respondent would approve of a teenage boy punching another teenage boy. If the interviewee answered yes, several follow-up questions were asked. Would the respondent approve if he did not like the other boy; if he had been ridiculed and made fun of by the other boy; if he had been challenged by the other boy to a fight; or if he had been punched by the other boy? A principle components factor analysis with orthogonal rotations was carried out and yielded a single-factor solution, with factor loadings of .91, .32, .65, .72. Cronbach’s alpha, an estimate of internal reliability, is .78.

Respondents’ answers on each item were summed to provide a composite index of the approval of violence. In the original analysis the measure was dichotomized; however, for the analysis at hand, we trichotomized the index as follows: low = answered no to the first question; medium = answered yes to the first question but did not answer yes to all four follow-up questions; high = answered yes to the first question and yes to all four follow-up questions. This measure, along with the others, was created from questions in the original survey that have not previously been investigated.

The other sport violence measure was derived from a question that asked how many physical fights the respondent had been in during the past 3 years when playing any other sport besides hockey. In the original analysis the measure was dichotomized; however, for the analysis at hand, we trichotomized the index as follows: low = 0 fights; medium = 1-3 fights; high = 4 or more fights.

The family violence measure was derived from a question that asked how many physical fights the respondent had been in during the last 3 years with a
member of his family. This also was trichotomized as follows: low = 0 fights; medium = 1-3 fights; high = 4 or more fights.

Group membership (nonplayers, house-league players, select-league players) and age (respondent's age in years) were the other two measures used in the study.

Data Analysis

We examined bivariate relationships using simple contingency tables. Multivariate analyses were performed using a linear logit model that overcomes the liabilities that arise in attempting to produce regression estimates with qualitative dependent variables (Aldrich & Nelson, 1984). These analyses included three dependent variables (approval of violence, other sport violence, and family violence) and two independent variables (group membership and age). In addition, an interaction of group membership with age was entered into the logistic models. For a comprehensive account of these statistical procedures, see Fox (1984). The analyses were conducted using the SAS LOGIST computer package.

Results

Approval of Violence

Based on cultural spillover theory, we hypothesized that (a) select-league players are more likely than house-league players and nonplayers to approve of violence, and (b) older boys, especially select-league players, are more likely than younger boys to approve of violence.

Table 1, column 1, shows that approval of violence varied significantly by group membership. This shows up most clearly in the low approval (or disapproval) category; for example, select-league players were significantly less likely than either house-league players or nonplayers to disapprove of violence (23.8% vs. 37.2% and 36.8% in the low category). As for age, older boys were less likely than younger boys to disapprove of violence (25.9% vs. 31.5%, 29.2%, and 40.2% in the low category), but this relationship did not reach statistical significance.

Table 2 gives the results of the polynormous logistic regression analyses, which assessed the extent to which the independent variables together predicted the three measures of violence. Only the main effects are shown because no statistically significant interactions were found. As the data in the first column of Table 2 reveal, the effects of group membership on approval of violence were reduced to nonsignificance in the multivariate analysis.

A second set of reduced analyses were then computed. Because the previous analysis found no significant difference in violence approval between house-league players and nonplayers, they were combined, recoded as other, and compared to the select-league players. The results found that in the low category of the bivariate analysis, select-league players were less likely that others to disapprove of violence (for example, 23.8% vs. 37.1%).

Other Sport Violence

We hypothesized that (a) select-league hockey players are more likely than house-league players and nonplayers to fight in other sports, and (b) older boys,
Table 1  Cross Tabulations of Three Measures of Violence

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Approval of violence, %</th>
<th>Other sport violence, %</th>
<th>Family violence, %</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Group membership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonplayers</td>
<td>36.8</td>
<td>56.0</td>
<td>6.6</td>
<td>69.1</td>
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<tr>
<td>House-league players</td>
<td>37.2</td>
<td>54.9</td>
<td>7.9</td>
<td>70.7</td>
</tr>
<tr>
<td>Select-league players</td>
<td>23.8</td>
<td>69.6</td>
<td>6.6</td>
<td>59.3</td>
</tr>
<tr>
<td>Chi-square test (p &lt;)</td>
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<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-13</td>
<td>40.2</td>
<td>51.9</td>
<td>7.8</td>
<td>69.2</td>
</tr>
<tr>
<td>14-15</td>
<td>29.2</td>
<td>62.7</td>
<td>8.1</td>
<td>71.2</td>
</tr>
<tr>
<td>16-17</td>
<td>31.5</td>
<td>63.0</td>
<td>5.5</td>
<td>62.4</td>
</tr>
<tr>
<td>18-21</td>
<td>25.9</td>
<td>67.2</td>
<td>6.9</td>
<td>58.0</td>
</tr>
<tr>
<td>Chi-square test (p &lt;)</td>
<td>0.07</td>
<td>0.01</td>
<td></td>
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</tr>
</tbody>
</table>
Table 2  Maximum Likelihood Analysis of Variance Based on Polytomous Logistic Regression for 3 Different Measures of Violence

<table>
<thead>
<tr>
<th>Group membership</th>
<th>Independent variables</th>
<th>Approval of violence</th>
<th>Other sport violence</th>
<th>Other Home Violence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DF</td>
<td>Coefficient</td>
<td>SE</td>
<td>P</td>
</tr>
<tr>
<td>Nonplayers</td>
<td>2 a</td>
<td>2.1252</td>
<td>1.24</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>1.3016</td>
<td>1.18</td>
<td>0.27</td>
</tr>
<tr>
<td>House-league players</td>
<td>2 a</td>
<td>-0.1530</td>
<td>0.42</td>
<td>0.72</td>
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<tr>
<td></td>
<td>b</td>
<td>-0.2022</td>
<td>0.41</td>
<td>0.62</td>
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<tr>
<td>Select-league players</td>
<td>2 a</td>
<td>-0.4133</td>
<td>0.44</td>
<td>0.35</td>
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<tr>
<td></td>
<td>b</td>
<td>0.1578</td>
<td>0.42</td>
<td>0.71</td>
</tr>
<tr>
<td>Age</td>
<td>2 a</td>
<td>-0.0161</td>
<td>0.07</td>
<td>0.82</td>
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<tr>
<td></td>
<td>b</td>
<td>0.0466</td>
<td>0.07</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Note. These analyses were performed with 3 response levels (low, medium, high). This involved two comparisons, one between high/low responses, and the other between medium/low responses. Comparison between high/medium responses can be inferred from the other two comparisons. Consequently, two separate sets of coefficients needed to be fitted for each independent variable in this study. a = high/low response comparison; b = medium/low response comparison.
especially select-league participants, are more likely than younger boys to fight in other sports.

Table 1, column 1, reveals that other sport violence is significantly related to group membership and age. Select-league players were more likely than house-league players and nonplayers to fight in other sport settings (more specifically, 12.1% vs. 4.6% and 3.3% in the high category). With respect to age, older boys were more likely than younger boys to fight in other sports (more specifically, 14.5% vs. 6.1%, 4.7% and 5.8% in the high category).

The multivariate analysis in Table 2 indicates that nonplayers, select-league players, and age are independent, statistically significant predictors of other sport violence. We thus computed reduced models, with house-league players and nonplayers combined into one category. The results of this analysis show that select-league players were nearly three times more likely to fight in other sports than the other group.

Reduced models were also constructed to show the effects of age and the recoded group membership (house-league players and nonplayers) on other sport violence. The most noticeable difference occurred in the age category, 18–21, in which older, select-league players were more likely than everyone else to fight in other sport settings (19.0% vs. 4.6% in the high category).

Because the difference was so pronounced for 18–21-year-olds, we collapsed age into two categories in which 18–21-year-olds were categorized as high and all others were categorized as low. A similar pattern then emerged. In the high response level for other sport violence, older, select-league players had the highest rate of violence (19.0% vs. 4.0%, 8.0%, and 4.0%) compared to younger select-league players, younger and older house-league players, and nonplayers. The regression model further showed that select-league players and age had independent, statistically significant effects on involvement in other sport violence.

**Family Violence**

The following were our final predictions: (a) Select-league players are more likely to act violently within the family setting than are house-league players and nonplayers, and (b) older boys, especially those playing select-league hockey, are more likely than younger boys to act violently in the family.

As shown in the last column of Table 1, both independent variables are significantly related to family violence, but not in the directions predicted. In the first place, house-league players had higher rates of family fighting than did nonplayers and select-league players (21.0% vs. 19.5% and 10.2% in the high category). In the second place, younger boys were significantly more likely to engage in family fights than older boys were (22.6% vs. 19.3%, 8.3%, and 4.6% in the high category). The regression analysis in Table 2 confirms these results.

Reduced models were again carried out. When select-league players and nonplayers were combined as other, house-league players scored highest on the family violence measure. More specifically, younger house-league players had higher rates of family violence than did older house-league players and others. The regression analysis further confirmed that house-league players and age exert independent, statistically significant effects on the rate of family violence.
Discussion

The results of this study offer some support for a cultural spillover explanation of hockey violence. Select-league hockey players were more likely to approve of violence and to act violently in other sport settings than were house-league players and nonplayers. When age was introduced into the analyses, older, select-league players were more likely to approve of violence and to act violently in other sports, but not in the family, compared to younger, select-league players, house leaguers, and nonplayers of all ages. The age effect was most pronounced in the highest age category, 18–21-year-olds.

It seems that only players over the age of 17, playing in highly competitive, professionalized leagues are prone to a spillover-violence effect. At this level, hockey is much more than a recreational activity; it is a way of life. For players, the goals are simple: win games, get noticed by college or professional scouts, and progress up through the ranks, hopefully ending up in the National Hockey League (NHL). By this point in their careers, many players have sacrificed their academic and social lives and will do whatever it takes to advance to the next level. The games themselves tend to be intense and violent.

The third measure of violence, family violence, produced unanticipated results. Although hockey players were more likely to fight in the family setting than nonplayers, among players, house-leaguers had higher rates of family violence than select-league players did, and younger boys had higher rates than older boys. These findings are difficult to explain. We can only surmise that other unmeasured factors systematically related to the variables in the model accounted for the unexpected results. Regarding the inverse relationship between age and violence in particular, perhaps most boys simply grow out of fighting with members of their family as they progress through adolescence. Further, because hockey violence did not have a spillover effect until about age 18, the effects of hockey violence on violence in the family could not be adequately assessed.

The implications of these findings for future research are as follows. Theoretically, they extend beyond previous research of this sort, mainly because no previous study of hockey violence employed a measure of the social approval of violence that was empirically independent of the (illegitimate) violence it attempted to explain. Merely inferring cultural support for violence from high rates of violent behavior, rather than measuring the cultural support as was done in this study, does not advance development of theory in this area. This research makes a contribution to theory by conceptualizing and employing a five-item index of approval of violence. However, owing to the cross-sectional nature of the data, it is difficult to determine whether hockey violence was a cause or an effect of violent behavior elsewhere. Thus, there is a need for experimental and longitudinal research designed to determine causal sequences.

Second, future studies might specifically examine what other factors in the family might have enhanced the effects of cultural spillover theory in sport. For example, would the number of siblings and their ages and sex make a difference? Would the amount of time spent in the home have a direct bearing on family violence? Does the presence or absence of a father make a difference? Does the presence of other hockey players increase the likelihood of violence?

Third, cross-cultural analyses also seem warranted. Hockey has become a global sport, as witnessed by the increase in the numbers of Americans, Russians,
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Swedes, and other Europeans in the NHL, as well as the appearance of countries such as New Zealand, Israel, and Turkey in recent Olympic-qualifying tournaments. Does hockey violence have the same spillover effects in Europe as it does in North America? Although fighting is relatively rare in European hockey, other sorts of violence, including illegal stick work, are not.

In the same vein, some claim that minor hockey in Quebec is more oriented toward finesse than minor hockey in the rest of Canada. The most abrasive and violent style of play is generally thought to be played in Western Canada. One might expect the strongest spillover effects to occur there. A comparative study of different regions within Canada, or the United States, might prove revealing.

There are many practical implications of this research that must be addressed as well. Most importantly, the findings suggest that hockey, especially for players in highly competitive leagues, has the potential for producing spillover effects of violence. Attention must be paid to the messages that the acceptance of fighting portrays, messages that may lead to illegitimate acts of violence elsewhere. Too often, it seems, attention is focused solely on the violence within the game, rather than the possible short-term and long-term spillover effects and the conditions producing these effects.

An obvious question from this study is whether other "violent" sports produce an increase in illegal acts of violent behavior by its participants in other settings. An examination of other sports certainly seems meritorious given the growing number of allegations of professional athletes committing violent, illegal acts away from the playing fields. The rape conviction of former heavyweight boxing champion Mike Tyson is the most notorious example of a professional athlete convicted for committing an illegal act of violence away from the playing field. The sport of boxing is also the most apparent illustration of a form of culturally legitimated sports violence, since its participants are continually lauded and rewarded for their ability to knock their opponents senseless. Some have suggested that Tyson's violence may have resulted in some way from the (legitimate) violence that exists within the sport of boxing.²

Cook (1991) offers a more direct examination of the possible spillover effects associated with the sport of boxing. She uses the case of former boxing standout Jake LaMotta to help illustrate her view. In a movie about his life, LaMotta is depicted as an individual who frequently beat friends and members of his family. The movie implies that LaMotta's behavior is a spillover from the legitimate violence inherent in boxing. Cook also refers to hockey and football players as possible candidates for performing illegitimate acts of violence away from their professional surroundings. She reasons that boxing, hockey, and football are sports in which violence and intimidation are central, and that there is much approval of such violent behavior among fans and players.

The recommendations stemming from this research demonstrate the need to conduct more research relating to the effects of sports violence. With respect to the sport of hockey, one can only hope that the professional leagues will acknowledge and support research from academics. In sum, if violence in different forms and places is related, as this study suggests, then recognizing and addressing this reality can have salutary effects.

References


**Notes**

'To preserve space, these data and others are not shown but are available upon request from the first author.

'The O.J. Simpson court case resulted in the examination of these issues in professional football.

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