Protecting Professional Boxers: Federal Regulations with More Punch

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I. Introduction

The sport of boxing dates back more than 5000 years and was practiced by the ancient Greeks, Romans and Egyptians.\(^1\) In the United States, the sport became popular in the late 1800’s.\(^2\) The key participants in the sport include the boxer, the trainer, the manager, the promoter, and the sanctioning organizations.\(^3\) Boxing is considered by many to be a brutal sport and unfortunately, acute and chronic brain injuries are the most common injuries sustained by boxers.\(^4\) The sport has long been regulated by state commissions and only in the last fifty years has the federal government begun to intervene.\(^5\) Eleven years ago the first federal statute regulating boxing in the United States was passed.\(^6\) This statute was amended four years later\(^7\) and although federal regulation has brought some improvement to the overall picture, many reforms are yet necessary.\(^8\)

\(^2\) Id. at 10.
\(^3\) Damon Moore, Down for the Count: Is McCain’s Bill the One to Lift Boxing Off the Canvas?, 4 VA. SPORTS & ENT. L.J. 198, 201 (2005).
\(^5\) McCain & Nahigian, supra note 1, at 10; Moore, supra note 3, at 212.
\(^7\) 15 U.S.C. §§ 6301-13 (2000); Moore, supra note 3, at 216.
\(^8\) David Altschuler, On the Ropes: New Regulations and State Cooperation Step into the Ring to Protect Boxing from Itself, 4 VAND. J. ENT. L. & PRAC. 74, 83 (2002); Patrick B. Fife, The National Boxing Commission Act of
State regulation remains ineffective and insufficient in providing for the health and safety of boxers.\(^9\) Many states lack sufficiently stringent medical regulations. Also, enforcement varies widely, which leads to forum shopping by the boxer.\(^10\) State regulation of boxing also results in conflict of interest because stringent regulation by a state may lead to lost revenues when a bout is scheduled elsewhere.\(^11\) Reform is unlikely to occur through unionization given the diversity of boxers in the sport.\(^12\) The only major sport in this country that lacks a central regulatory organization is boxing.\(^13\) Therefore, a centralized federal regulatory administration is the most logical and viable solution to provide for the reforms necessary in the sport of boxing.\(^14\) Some legal research supports this view and suggested reforms have focused on the implementation of a central regulatory board and proposed regulations regarding the participants in the sport.\(^15\) The research has focused only broadly and to a very limited degree on the necessary specific medical reforms. I am proposing detailed regulations from a medical-neurosurgical viewpoint which need to be incorporated into proposed federal legislation to decrease the morbidity and mortality in professional boxing.

\(^{2001}:\) It’s Time for Congress to Step into the Ring and Save the Sport of Boxing, 30 HOFSTRA L. REV. 1299, 1306 (2002).
\(^9\) Altschuler, supra note 8, at 83; Fife, supra note 8, at 1306.
\(^10\) Altschuler, supra note 8, at 83.
\(^11\) McCain & Nahigian, supra note 1, at 16.
\(^13\) Maese, supra note 12; Manning, supra note 12.
\(^14\) McCain & Nahigian, supra note 1, at 33.
\(^15\) Id. at 30-33.
II. Boxing: A Historical Perspective

Boxing has been a part of many societies dating back more than 5000 years to ancient times, although the exact origin of the sport is unknown. The ancient Greeks, Romans and Egyptians participated in a form of boxing which resembles modern day boxing matches. The Egyptians boxed with their bare hands and later the Greeks used hand wrappings and included the sport in the first summer Olympic Games. The Greeks also realized the need to protect the fighters and instituted the use of protective headgear during the Olympic competitions. In contrast, the Romans increased the bloodshed in boxing by inserting a heavy metal weight with sharp spikes into the hand wrappings which led to many fatalities, frequently after only one punch. The sport became increasingly violent and, by 500 A.D., the Roman emperor Theodoric abolished boxing. The abolishment of boxing coincided with the fall of the Roman Empire after which records of boxing disappeared.

Boxing resurfaced in the 1600’s in Great Britain and rapidly gained popularity. In 1743 a British fighter, Jack Broughton, wrote the modern rules of boxing after he unintentionally killed his opponent during a bout in London in 1741. Broughton’s Rules became the basis for

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16 Id. at 9 (noting that ancient stone carvings suggest that boxing existed more than five thousand years ago in what is currently Iraq).
17 Id.; Ian Forman, Boxing in the Legal Arena, 3 SPORTS LAW. J. 75, 75 (1996) (noting that the word boxing comes from “puxos” the Greek word for box and “pugme” the word for a clenched fist which is shaped like a box. Also the term “pugilism” is derived from the Latin term “pugilatus” which means to fight with the fist).
18 McCain & Nahigian, supra note 1, at 9; Flannery & O’Brien, supra note 4, at 420.
19 Forman, supra note 17, at 75.
20 Flannery & O’Brien, supra note 4, at 420 (noting that the heavy metal weight was called a “cestus” and after the spikes were added it was called a “murmex”).
21 Id.
23 Forman, supra note 17, at 75.
24 McCain & Nahigian, supra note 1, at 9. Broughton’s Rules consisted of twenty-nine regulations which included the following: the termination of a fight if a boxer fell to the mat and could not get up for thirty seconds, a downed fighter could not be hit by his opponent, and punches below the waist were prohibited. Welcome to Sport Boxing at
future boxing codes in Great Britain and the United States. Boxing had first become legal in California and Louisiana and subsequently in New York. In the late 1800’s boxing had become very popular in the United States and by 1880 Madison Square Garden was considered one of the premier boxing venues in the world. The Horton Act, which had legalized boxing in New York, expired in 1890 but boxing did not disappear. Instead the sport went underground and matches were held on river barges and in back rooms of bars and taverns. The ban was difficult to enforce and boxing continued to thrive.

In the 1920’s New York led a movement to legalize boxing under the control of a state regulatory commission, and these early commissions developed regulations to address the health and safety concerns for boxers. Other states followed and by 1930 most states had legalized boxing. Following the legalization of boxing the sport continued to grow in popularity and the emergence of radio broadcasting led to an increased fan base. Heavily promoted matches were held in increasingly larger venues which led to bigger gate receipts. Some boxers such as Jack Dempsey and Joe Lewis became national celebrities and shrewd promoters realized that marketing popular fighters and interesting matches could lead to huge


25 Forman, supra note 17, at 76.
26 McCain & Nahigian, supra note 1, at 10.
27 Id.
28 Id.
29 Id.
30 Forman, supra note 17, at 76.
31 Id.
32 Id. at 77 (noting that the Walker Law limited fights to fifteen rounds and that a qualified physician was required to attend each fight).
33 McCain & Nahigian, supra note 1, at 11.
34 Id.
35 Id.
profits.\textsuperscript{36} As the sport of boxing grew, so did the roles of the promoter and manager, and later, with the advent of television, the role of the media as it is known today.\textsuperscript{37}

III. Boxing: The Participants and their Roles

Unlike other sports in the United States, professional boxing is not governed by a single, central organization that establishes rules or designates bouts and champions.\textsuperscript{38} Additionally, the sport of boxing stands alone in that it is divided into two distinct groups: 1) the premier boxers who earn millions of dollars and are well known to Americans and 2) the much larger group of unknown, journeymen boxers who fight before small crowds for nominal purses.\textsuperscript{39} To understand this unique sport and how changes might be made in the sport it is important to understand the participants, their roles and their relationships with one another.\textsuperscript{40} Changes in the sport may affect these relationships and the interests of the boxers themselves, the managers, the trainers, the promoters and the sanctioning organizations, not to mention the interests of the media, the advertisers, and the fans.\textsuperscript{41}

A. The Boxer and the Trainer

In contrast to other sports, the goal of the boxer is to injure the opponent.\textsuperscript{42} The boxer attempts to hit the opponent with gloved fists while simultaneously trying to avoid being hit.\textsuperscript{43} The trainer is the individual who instructs the boxer in technique.\textsuperscript{44} The trainer must understand

\textsuperscript{36} Id.; Forman, supra note 17, at 77.
\textsuperscript{37} McCain & Nahigian, supra note 1, at 11.
\textsuperscript{38} Fife, supra note 8, at 1300.
\textsuperscript{39} McCain & Nahigian, supra note 1, at 8. The purse is the amount of money or other compensation that is paid to a boxer for fighting in a match. Permanent Rules Department of Licensing (July 4, 2004), at http://72.14.207.104/search?q=cache:T4xsO75x0HIJ:slc.leg.wa.gov/wsr/2004/16/04-16-045.htm+definition+boxing+purse&hl=en&gl=us&ct=clnk&cd=10.
\textsuperscript{40} Moore, supra note 3, at 201.
\textsuperscript{41} Id.
\textsuperscript{42} Forman, supra note 17, at 78.
\textsuperscript{43} Moore, supra note 3, at 201.
\textsuperscript{44} World Boxing Association at http://www.wbaonline.com/technical/TechnicalStatements/RULES_GOVERNING.PDF (last visited Feb. 12, 2006).
boxing, be able to convey instruction, and understand the skills of his pupil’s opponents.\textsuperscript{45} The goal of the trainer and the boxer is for the boxer to move effectively, inflict more harm, and take fewer blows.\textsuperscript{46}

Boxers fight in specific classes based on their weight with narrow ranges for each class.\textsuperscript{47} Bouts usually consist of twelve rounds lasting three minutes each with one minute between rounds.\textsuperscript{48} Judges use a ten-point scoring system with the winner of each round earning ten points and the loser of the round earning a proportionally smaller number of points.\textsuperscript{49} By landing more punches the boxer scores more points.\textsuperscript{50} If a boxer is judged by the referee to have taken such a beating that the boxer cannot physically continue to fight then the boxer has lost by a “technical knockout.”\textsuperscript{51} A boxer can win by a “knockout” if he is able to knock his opponent to the mat and the opponent remains down for at least ten seconds.\textsuperscript{52}

Many boxers become involved in the sport in the hope of winning large purses and escaping their impoverished background.\textsuperscript{53} In reality only a very small percentage of boxers earn large sums of money and most retire without any significant financial stability.\textsuperscript{54} There are more than 8,500 licensed professional boxers in the United States and while a few elite boxers enjoy financial success most do not earn enough money to support themselves and their

\textsuperscript{45} Id.  
\textsuperscript{46} Moore, supra note 3, at 202.  
\textsuperscript{49} Id.  
\textsuperscript{50} Forman, supra note 17, at 78.  
\textsuperscript{51} Id. (noting that a “technical knockout,” also called a T.K.O., may occur even if a boxer is still on his feet).  
\textsuperscript{52} Id. (noting that the referee performs the ten second count).  
\textsuperscript{53} Fife, supra note 8, at 1301.  
\textsuperscript{54} Id.
families. Most boxers travel from town to town and earn as little as $400 a fight. Boxing is structured in such a way that the boxers give up about half of their earnings from a fight to their managers and trainers and for licensing fees. Also, because many boxers are uneducated and come from poor beginnings they are exploited by corrupt individuals in the sport. The sport of boxing has developed into a multi-billion dollar industry but this measure of success has not trickled down to the fighters proportionately.

B. The Manager

The manager represents the boxer in all business transactions related to boxing. The manager has many duties including selection of a trainer for the boxer, selecting a promoter and negotiating the terms of the promotional contract. The manager in part is responsible for choosing his boxer’s opponent. These decisions must be made cautiously and wisely because they impact not only the boxer’s future financial success but also the boxer’s health. Managers are licensed by the state and each state has different screening procedures. A manager is usually paid one-third of a boxer’s purse in exchange for management services.

55 Altschuler, supra note 8, at 75.  
56 Fife, supra note 8, at 1302.  
57 Id.  
58 Altschuler, supra note 8, at 75.  
59 Id.  
60 Moore, supra note 3, at 201.  
62 Groschel, supra note 48, at 931.  
63 Id.  
64 Crisco, supra note 61, at 1145 (noting that state requirements regarding licensing of manager varies significantly from state to state. For example, some states only require a fee while other states such as Nevada and New Jersey require the manager to go through a screening process).  
65 Id.
C. The Promoter

Aside from the boxer, the promoter is arguably the most important participant in the sport. The promoter negotiates with the manager to arrange fights for the boxer and usually, the promotional contract between the boxer and the promoter is exclusive, which gives the promoter significant control over the boxer’s career. The boxer is paid a lump sum in exchange for the promoter’s guarantee of a minimum number of bouts per year with a minimum purse for each bout. The promoter pays all the expenses incurred in promoting the bout and thus assumes the financial risk for each bout. The promoter receives revenues from ticket sales, the sale of television rights, and ring advertisements.

The job of the promoter is more complicated than signing up fighters and arranging bouts. Relationships with boxers, managers, television executives, the media, and the sanctioning organizations must be cultivated. The promoter may spend large sums of money to obtain a higher ranking for his boxer or get a bout sanctioned, and therefore, he must be a shrewd business man. Additionally the promoter must be a showman with an ability to stage bouts in marketable locations with boxers that grab the public’s attention.

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66 Forman, supra note 17, at 92.
67 Crisco, supra note 61, at 1146.
68 Id. at 1147 (noting that the promoter ultimately chooses the boxer’s opponents).
69 Id. at 1146.
70 Fife, supra note 8, at 1302.
71 Moore, supra note 3, at 204 (noting that the major source of revenue for the promoter is from the sale of both foreign and domestic television rights).
72 Forman, supra note 17, at 92.
73 Groschel, supra note 48, at 933.
74 Forman, supra note 17, at 93.
75 Id. at 92.
D. The Sanctioning Organizations

Sanctioning organizations are national or international groups that rank boxers and license championship and elimination bouts only.\textsuperscript{76} These organizations do not regulate the sport of boxing and in the United States that regulation is left up to each individual state.\textsuperscript{77} There are more than a dozen sanctioning organizations ranking the top fighters in each weight class and they operate independently, essentially competing with one another in order to promote their “champion” or contender.\textsuperscript{78} A fight will not be considered a championship match unless it is sanctioned by one of these organizations.\textsuperscript{79} The top rankings are valuable to the boxers and the promoters because they determine which boxers can fight for a championship and which boxers will have the opportunity to win the largest purses.\textsuperscript{80} These organizations are funded largely by the collection of a fee levied against the boxers in exchange for the boxer’s opportunity to compete in a bout for that organization’s championship title.\textsuperscript{81} Essentially, the sanctioning organizations use the boxers to raise revenue.

There is no oversight of these organizations and prior to 2000 these organizations did not follow published, objective criteria in establishing their rankings of boxers.\textsuperscript{82} The legitimacy of the rankings by these organizations has been criticized by the boxing industry, sportswriters and

\textsuperscript{76} Groschel, supra note 48, at 934 (noting that these organizations are not involved with lower ranking boxers or lower level boxing matches). The most prominent sanctioning organizations are the World Boxing Council (“WBC”) based in Mexico City, the World Boxing Association (“WBA”) based in Venezuela, and the International Boxing Foundation (“IBF”) based in New Jersey. McCain & Nahigian, supra note 1, at 24.
\textsuperscript{77} Walsh, supra note 4, at 72.
\textsuperscript{78} Fife, supra note 8, at 1303; McCain & Nahigian, supra note 1, at 24. Because there are multiple organizations often more than one “champion” exists for each weight class. Groschel, supra note 48, at 934-35.
\textsuperscript{79} Groschel, supra note 48, at 936.
\textsuperscript{80} Fife, supra note 8, at 1303. To compete for a championship most of the sanctioning organizations require that the boxer be ranked in the top ten. Walsh, supra note 4, at 74.
\textsuperscript{81} McCain & Nahigian, supra note 1, at 24 (noting that the fee is usually 3-5% of the purse).
\textsuperscript{82} Crisco, supra note 61, at 1152. The Muhammad Ali Boxing Reform Act requires that these organizations disclose their rating policies annually by filing this information with the Federal Trade Commission or by posting it on their website. 15 U.S.C. §§ 6301-13 (2000); McCain & Nahigian, supra note 1, at 24-25.
fans for basing rankings on financial agreements rather than the boxer’s ability.\textsuperscript{83} Several
promoters have acknowledged that they bribed the officers of sanctioning organizations in order
to raise the rankings of their boxers.\textsuperscript{84} There have also been allegations that particularly
powerful promoters exert significant control over the sanctioning organizations by agreeing to
have their most marketable boxers fight in bouts for a particular sanctioning organization in
exchange for preferential rankings and treatment for the promoter’s stable of boxers.\textsuperscript{85} These
deceptions have many implications. They can lead to a mismatch between boxers by placing a
relatively unskilled boxer in the ring with a very skilled boxer, or one of a heavier weight class,
thereby jeopardizing the safety of the unskilled or lighter weight boxer.\textsuperscript{86}

An example of such a dangerous mismatch is one that occurred in Las Vegas in 1982.\textsuperscript{87} Duk Koo Kim, a twenty-three year old Korean boxer, was undefeated in thirteen bouts.\textsuperscript{88} Kim
had fought only one bout outside of South Korea and all of his fights had been against obscure
opponents, but in spite of that history he was designated by the World Boxing Association as the
number one challenger to the world lightweight champion, Ray “Boom Boom” Mancini.\textsuperscript{89} Kim
was not listed among Korea’s top forty boxers by the Korean Sports Foundation\textsuperscript{90} and not a
single boxing expert among the fifty experts with \textit{The Ring} magazine ranked Kim as a top ten
boxer.\textsuperscript{91}

\textsuperscript{83} McCain & Nahigian, \textit{supra} note 1, at 24.
\textsuperscript{84} Fife, \textit{supra} note 8, at 1303 (noting that boxing promoter Bob Arum paid former IBF chief Bob Lee $100,000 to
secure a better ranking for his boxer).
\textsuperscript{85} Crisco, \textit{supra} note 61, at 1153.
\textsuperscript{86} Fife, \textit{supra} note 8, at 1304.
\textsuperscript{87} Walsh, \textit{supra} note 4, at 75.
\textsuperscript{88} \textit{Duk Koo Kim in the News} (Dec. 7, 2005), at
\textsuperscript{89} Id.
\textsuperscript{90} Id. (noting that the Korean Sports Foundation is the government’s boxing supervisory organization).
\textsuperscript{91} Id. (noting that \textit{The Ring} is considered the “bible of boxing.”). \textit{The Ring} magazine was first published in 1922 and
is considered by some to be more authoritative and open than the sanctioning organizations. The magazine gives a
full explanation of its rankings and changes in rankings. \textit{Ring Magazine from Wikipedia the Free Encyclopedia} (Jan.
In contrast to Kim, Mancini was a proven fighter having recently won two bouts over world class fighters. On November 13, 1982 the two fighters met at Caesar’s Palace. In the later rounds of the fight Mancini clearly dominated, and Kim was counted out in the fourteenth round. Within minutes Kim was comatose and although he underwent brain surgery to remove a hemorrhage he died five days later. Kim was not the only casualty of the fight. Richard Greene, the referee of the fight, committed suicide three months later and seven months after the fight Kim’s mother also committed suicide. The lack of a national regulatory organization in the United States contributed to the fact that these clearly mismatched boxers were allowed to fight.

IV. Brain Related Morbidity and Mortality in Boxing

Brain injuries are the most common type of injury suffered by boxers and there is a relatively high incidence of both acute and chronic brain injuries. Clinical studies have shown that boxing leads to severe, permanent brain injuries. The extent of a boxer’s brain injury is mainly dependent on the number of matches fought and the number of blows to the head the boxer sustains during a match. The boxer’s weight class also impacts the extent of the boxer’s brain injury. The intensity of a heavyweight’s punch is greater than the intensity of a punch of

92 Duk Koo Kim in the News, supra note 88.
93 Id.
94 Id.
95 Id. (noting that some changes including limiting bouts to twelve rounds instead of fifteen were instituted as a result of Kim’s death).
97 Id.
98 Walsh, supra note 4, at 75.
99 Id. at 64.
100 Flannery & O’Brien, supra note 4, at 426.
102 Id.
103 Id.
a lighter weight class boxer. 104 Acute injuries include concussions, and brain contusions and hemorrhages. 105 These injuries may span a wide spectrum of pathology from transient diminution of cognitive or physical function to permanent brain damage. 106 The most common chronic brain injury in boxers is an encephalopathy or the “punch-drunk” syndrome caused by repeated blows to the head. 107 This syndrome is often the result of the aggregate effects of repeated minor head trauma. 108 Depending on the study, approximately 50-68% of boxers will sustain an acute traumatic brain injury and 20-50% will suffer from chronic traumatic brain injuries. 109 The mortality rate in boxing is 1.3 deaths per 100,000 participants per year and while this rate is much lower than the morbidity rate, it is significant. 110

A. Acute Brain Injuries in Boxing

The incidence of acute brain injuries varies according to clinical studies but occurs in approximately 50% or more of boxers. 111 A six-year military study conducted by the United States Army revealed that 68% of boxers suffered a variety of acute head injuries requiring

104 Id. There are seventeen classes of boxers based on their weights starting with the strawweight class, which includes boxers weighing up to 105 lbs. The heavyweight class includes boxers weighing more than 200 lbs. Boxing Weight Classes at http://www.absoluteastronomy.com/reference/boxing_weight_classes (last visited Feb. 19, 2006).
105 R.T. Ross & M.G. Ochsner Jr., Acute Intracranial Boxing-related Injuries in U.S. Marine Corps Recruits: Report of Two Cases, 164 MIL MED 68-70, 68 (1999). Concussions have been classically defined as brain injuries leading to a temporary loss of consciousness. Contusions are injuries to the brain substance, the parenchyma, which are usually accompanied by some degree of bleeding and edema (swelling). Hemorrhages are frank collection of blood occurring within the parenchyma or outside the brain between the brain and the skull. MARSHALL B. ALLEN, JR. & ROSS H. MILLER, ESSENTIALS OF NEUROSURGERY A GUIDE TO CLINICAL PRACTICE 342-43 (1st ed. 1995).
106 Ross & Ochsner, supra note 105, at 68.
107 K. Blennow et al., There is Strong Evidence that Professional Boxing Results in Chronic Brain Damage. The More Head Punches during a Boxer’s Career, the Bigger is the Risk, 102 LAKARTIDNINGEN 2468-70, 2468 (2005).
108 Id.
111 Id. at 427.
hospital treatment. Some acute injuries may produce minimal or unobservable early effects, but over time may lead to chronically observable effects. A boxer’s punch may be very powerful, exerting a force sixty times greater than gravity. Such a punch is known to be equivalent to being struck on the head with a thirteen pound mallet at a speed of twenty miles-per-hour.

Brain injuries during boxing are caused by both the impact of the fist on the skull and the resulting movement of the skull and brain in response to the punch. When the fist hits the skull there is a transient acceleration of the head. The skull moves faster than the brain due to the greater inertia of the brain, and consequently when the skull stops moving the brain continues to move. This causes the brain to hit the bony ridges along the base of the skull and the inner surfaces of the skull leading to brain contusions and hemorrhages resulting from the rupture and tearing of blood vessels. Collections of blood may accumulate inside the brain or between the brain and the skull and these expanding clots act as masses exerting pressure on the adjacent brain tissue. Injuries can occur near the site of the impact or far away from the site. Blows to the head may also cause diffuse shearing injuries of neurons or groups of neurons which may

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112 Enzenauer et al., supra note 109, at 1463 (noting that these injuries included concussions, contusions and hemorrhages).
114 Flannery & O’Brien, supra note 4, at 427 (noting additionally that a boxer’s punch may have a speed in excess of thirty miles per hour). There are four types of punches a boxer uses. They include the jab, cross, hook and upper cut and they vary in their power. Everything Boxing (May 31, 2003), at http://72.14.207.104/search?q=cache:Xl883KI-_tEJ:www.everything2.com/index.pl%3Fnode%3Dboxing+types+of+punches+used+boxing&hl=en&gl=us&ct=clnk&cd=3.
115 Flannery & O’Brien, supra note 4, at 427.
116 Constantoyannis & Partheni, supra note 113, at 79.
117 Id.
118 Id.
119 Id.
121 Id. (noting that such injuries are described as coup and contre-coup injuries, respectively).
lead to a concussion or more severe brain injury. Finally, blows to the neck may injure the carotid artery and lead to decreased blood flow to the brain.

Not uncommonly, an intracranial hemorrhage can have devastating effects. Such was the case involving Gerald McClellan, an American boxer and one-time middleweight champion of the world. On February 25, 1995 the twenty-seven year-old McClellan fought British fighter Nigel Benn. McClellan, after taking a severe beating in earlier rounds in which he sustained almost seventy full blows to his head, kneeled down in the tenth round and was counted out. He was able to walk back to his corner before losing consciousness. After being taken to a hospital McClellan was resuscitated and able to talk shortly before a scan was obtained which showed a large acute subdural hematoma. Although McClellan was rushed to surgery and underwent evacuation of the hematoma he sustained a significant brain injury. McClellan is now blind, cannot walk on his own, and requires around-the-clock care. He finished his career with thirty-one wins and three losses.

125 Id.
126 Ross Rosen, In the Aftermath of McClellan: Isn’t it Time for the Sport of Boxing to Protect its Participants?, 5 SETON HALL J. SPORT L. 611, 622 (1995).
127 Michael Hirsley, Fighting a New Foe; Brain Injury is Boxer’s Latest Challenger, CHICAGO TRIBUNE, Feb. 7, 1999 at C1.
128 Id.
129 Id.
130 Id.
131 Id.
132 Gerald McClellan Answers.com, supra note 124 (noting that in his thirty-one wins he had twenty-nine knockouts).
B. Chronic Brain Injuries in Boxing

Studies have shown that approximately 20-50% of all boxers will suffer from chronic traumatic brain injuries.\textsuperscript{133} Both clinical and autopsy studies have proven that boxing can lead to a significant degree of permanent brain damage.\textsuperscript{134} Variables associated with the development of chronic traumatic brain injuries include the duration of the boxer’s career, the total number of bouts, and the amount of blows to the head that the boxer sustains.\textsuperscript{135} The boxer’s weight class is also important because the intensity of the punch of the heavier weight class boxers is greater than that of the lighter weight class boxers.\textsuperscript{136}

One severe form of chronic traumatic brain injury is referred to as “punch drunk” syndrome or dementia pugilistica.\textsuperscript{137} It is a traumatic form of Parkinsonism in which the boxer will develop varying degrees of motor, cognitive, and behavioral impairments.\textsuperscript{138} Commonly the boxer will display slurred speech, hand tremors, an unsteady gait and confusion.\textsuperscript{139} On average, the initial signs of damage appear approximately fifteen years after the onset of the boxer’s career.\textsuperscript{140} Pathological studies have shown that the brain damage in boxers is usually diffuse, involving the entire brain.\textsuperscript{141} There is shrinkage of the brain in addition to neuronal loss and replacement by glial scar tissue.\textsuperscript{142} Many ex-boxers suffer from dementia pugilistica.\textsuperscript{143} Perhaps the most famous casualty is Muhammad Ali who is clearly affected with a Parkinsonian

\textsuperscript{133} Jordan, \textit{supra} note 109, at 179; Flannery & O’Brien, \textit{supra} note 4, at 428 (noting that some studies have shown that as many as 60%-85% of boxers suffer to some extent from chronic traumatic brain injuries).
\textsuperscript{134} Unterharnscheidt, \textit{supra} note 101, at 1027.
\textsuperscript{135} \textit{Id.}
\textsuperscript{136} \textit{Id.}
\textsuperscript{137} Blennow et al., \textit{supra} note 107, at 2472.
\textsuperscript{138} Jordan, \textit{supra} note 109, at 179.
\textsuperscript{139} Walsh, \textit{supra} note 4, at 66.
\textsuperscript{140} Rosen, \textit{supra} note 126, at 623.
\textsuperscript{141} Unterharnscheidt, \textit{supra} note 101, at 1027.
\textsuperscript{142} \textit{Id.} Glial cells are the non-neuronal cells in the brain that have metabolic functions. They are interposed between the neurons and the blood vessels. \textit{Stedman’s Medical Dictionary} 1201 (26th ed. 1995).
\textsuperscript{143} Flannery & O’Brien, \textit{supra} note 4, at 427.
syndrome most likely from boxing. Ali has admitted that “boxing probably did this to me,” although his private physician claims Ali’s development of Parkinson’s disease is not related to his boxing career.

Some boxers develop a more pure form of dementia similar to Alzheimer’s disease as a result of sustaining repeated blows to the head. Pathologically, boxers with dementia share many of the characteristic changes seen in the brains of patients with Alzheimer’s disease.

Another famous heavy weight fighter, Jerry Quarry, died at the age of fifty-three after developing a severe dementia. In 1983, when Quarry was thirty-seven years-old, physicians examining him found evidence of dementia on neurological tests. He fought twice after that and then retired for nine years. Dr. Peter Russell, a neuropsychologist, examined Quarry in 1992 and found that the fighter had “the brain of an eighty year-old with a third stage dementia similar to Alzheimer’s.” In spite of his poor neurological status, the then forty-seven year-old Quarry was allowed to fight that same year and took a six-round beating by thirty-one year-old journeyman boxer Ron Cranmer. By the age of fifty, just three years before his death, Quarry

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144 Id.
148 Jordan, supra note 109, at 179. Alzheimer’s disease usually affects an individual in the later stages of life and involves a progressive mental deterioration. Pathologically the brain is shrunken and microscopically the classic findings are neurofibrillary tangles and amyloid plaques. STEDMAN’S MEDICAL DICTIONARY, supra note 142, at 492.
150 Id.
151 Danny Wells, How many Quarrays Will it Take?, CHARLESTON GAZETTE, Jan. 15, 1999 at B1 (noting that Dr. Russell also stated Quarry would be lucky to live another ten years).
152 Hirsley, supra note 149, at N1 (noting that Quarry earned $1050 in his match which he lost to Cranmer).
was child-like and confused, requiring help in dressing and eating.\textsuperscript{153} Boxing is the only sport that causes permanent brain damage in a significant number of participants.\textsuperscript{154}

\textbf{C. Brain Related Mortality in Boxing}

The mortality rate for American boxers is considerably lower than the morbidity rate with 1.3 deaths per 100,000 participants per year.\textsuperscript{155} The fatality rate in professional boxing is less than the fatality rates for sky-diving and motorcycle racing and ranks eighth in fatality rates for all sports.\textsuperscript{156} In the seventy-nine years between 1918 and 1997 a total of 659 deaths from boxing have been recorded.\textsuperscript{157} This average of nine deaths per year appears to be decreasing in recent years.\textsuperscript{158} Most deaths in boxing are due to the occurrence of an acute subdural hematoma.\textsuperscript{159} These collections of blood usually result from the tearing of a vessel on the surface of the brain or the tearing of a vein where it traverses the narrow subdural space between the brain and the skull.\textsuperscript{160} Acute subdural hematomas are usually associated with significant swelling of the underlying brain and the mortality rate associated with this condition ranges from 60-90\%.\textsuperscript{161} A second but much less likely cause of death in boxing is the development of an epidural hematoma which results from the tearing of an artery within the dura with hemorrhage between

\textsuperscript{153} Id.
\textsuperscript{154} Walsh, supra note 4, at 67.
\textsuperscript{155} Phillips, supra note 110, at 7.
\textsuperscript{156} Walsh, supra note 4, at 67; Joy Hirdes Beech, \textit{Ring Death Raises Safety Awareness: Women's Boxing has Same Precautions as that of the Men}, \textit{Times-Picayune}, June 3, 2005 at 3. College football, by comparison, has three fatalities per 100,000 participants. Kieran Mulvaney, \textit{Boxing and the Brain} (Feb. 2, 2005), at http://64.233.179.104/search?q=cache:Y1CxskAt6RwJ:www.tigerboxing.com/articles/index.php%3Faid%3D1001244888%26PHPSESSID%3D406996d64b069ec931de6b25a6b698d+fatality+boxers+subdurals&hl=en&gl=us&ct=clnk&cd=1; Scuba diving has 11 fatalities per 100,000 participants and motorcycle racing has 7 fatalities per 100,000 participants. \textit{The Anti-Boxing Lobby} (Sept. 2005), at http://72.14.203.104/search?q=cache:5JbURY6H0TsJ:www.users.on.net/~tony.whelan/gaysport/antiboxing.htm+risk+head+injuries+boxing+scuba+diving+motorcycle+racing&hl=en&gl=us&ct=clnk&cd=4.
\textsuperscript{157} Constantoyannis & Partheni, supra note 113, at 79.
\textsuperscript{158} Id.
\textsuperscript{159} Id.
\textsuperscript{160} ALLEN & MILLER, supra note 105, at 352 (noting that a collection of blood develops between the brain and the dura, the covering over the brain, and that this collection exerts pressure on the brain).
\textsuperscript{161} Constantoyannis & Partheni, supra note 113, at 79.
the dura and the skull. Both result in consequent compression of brain tissue with loss of function.

Twenty-six year old boxer Beethavean Scottland died as a result of an acute subdural hematoma he sustained in a designated ten-round fight with George Jones on June 26, 2001. Although Scottland was a super middleweight he was fighting out of his class when he fought Jones, a light heavyweight. The fight took place on the deck of the U.S.S. Intrepid docked in the Hudson River. After the seventh round the ringside physician told the referee that Scottland should not take any more punches, but the referee allowed the fight to continue. Clearly Scottland was tiring and with thirty-seven seconds to go to the end of the tenth round Jones delivered a blow which knocked Scottland unconscious. At Bellevue Hospital Scottland underwent surgery to remove a subdural hematoma but died six days later.

V. The Evolution of Federal Regulation of Professional Boxing

The federal government’s first intervention into professional boxing did not occur until the 1950’s when the Department of Justice (“DOJ”) began to investigate the activities of organized crime within the sport. The Supreme Court found that the sport of boxing utilized the channels of interstate commerce and therefore, the sport was subject to federal antitrust laws. The government was able to use federal antitrust laws to successfully prosecute a large

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162 ALLEN & MILLER, supra note 105, at 352-53. (noting that an epidural hematoma is a collection of blood outside the dura between the dura and the skull); Mulvaney, supra note 147.
163 Id.
165 Id. (noting that Scottland’s original match with a boxer in his weight class had fallen through and Jones was substituted as a last minute replacement.).
166 Id.
167 Id.
168 Id.
169 Id.
170 McCain & Nahigian, supra note 1, at 12; Moore, supra note 3, at 212.
corporation acting as a shell for organized crime in the sport of boxing.\textsuperscript{172} Over the next several decades members of Congress worked unsuccessfully to pass federal legislation regarding the sport of boxing.\textsuperscript{173} In 1996 the first federal statute regulating boxing was passed and subsequently amended in 2000.\textsuperscript{174}

**A. 1950’s: Federal Investigation and Prosecution of Organized Crime in Boxing**

The history of state regulation of boxing dates back to the early 1900’s but federal government intervention did not take place until the late 1950’s.\textsuperscript{175} The Federal Bureau of Investigation ("FBI") believed the sport was being controlled by organized crime and instituted multiple investigations in conjunction with the DOJ.\textsuperscript{176} The International Boxing Club ("IBC") was organized in 1949 for the purpose of promoting boxing and over the next decade the organization had gained exclusive control over the top boxers and the largest boxing venues with the assistance of organized crime.\textsuperscript{177} IBC was used as a shell corporation through which organized crime fixed fights and bribed boxing judges while using the boxing industry as a front for illegal activities including gambling and money-laundering.\textsuperscript{178} Using federal antitrust laws the government successfully prosecuted the IBC monopoly.\textsuperscript{179}

The Supreme Court previously had considered, as a threshold issue, whether the federal government was constitutionally permitted to regulate boxing.\textsuperscript{180} The Court found that although the actual boxing match is primarily an intrastate event the revenues from the boxing match are

\textsuperscript{173} McCain & Nahigian, \textit{supra} note 1, at 13-14, 16-17; Moore, \textit{supra} note 3, at 212-13.
\textsuperscript{174} McCain & Nahigian, \textit{supra} note 1, at 19; Moore, \textit{supra} note 3, at 216.
\textsuperscript{175} Moore, \textit{supra} note 3, at 212.
\textsuperscript{176} McCain & Nahigian, \textit{supra} note 1, at 12.
\textsuperscript{177} Int’l Boxing Club, 358 U.S. at 245; \textit{Id.} at 11.
\textsuperscript{178} McCain & Nahigian, \textit{supra} note 1, at 11.
\textsuperscript{179} Int’l Boxing Club, 358 U.S. at 252-53; \textit{Id.} at 12.
\textsuperscript{180} Int’l Boxing Club, 348 U.S. at 238-39; McCain & Nahigian, \textit{supra} note 1, at 12.
largely derived from interstate broadcasts, endorsements and ticket sales.\textsuperscript{181} Furthermore, promoters negotiated contracts and leased arenas through the channels of interstate commerce.\textsuperscript{182} Federal antitrust laws were therefore applied to the business of boxing which utilized the channels of interstate commerce.\textsuperscript{183}

**B. 1960’s-1980’s: Proposed Federal Regulation of Boxing Fails**

In 1960, on the basis of the government’s successful prosecution, Senator Estes Kefauver of Tennessee initiated a four year investigation by the Senate Subcommittee on Antitrust and Monopoly of corruption in boxing.\textsuperscript{184} Senator Kefauver proposed two bills which would have established a National Boxing Commission within the DOJ with uniform federal health and safety regulations for boxers.\textsuperscript{185} His proposals were resisted by Attorney General Robert Kennedy who did not favor the intervention of the federal government into the sport of boxing.\textsuperscript{186} Senator Kefauver died in 1963 before both pieces of his proposed legislation came to a vote and no legislation was passed.\textsuperscript{187} Over the next several decades Congress introduced multiple bills focused on addressing the lack of uniform regulations in boxing but none were passed.\textsuperscript{188}

**C. 1990’s: Passage of Federal Statutes Regulating Boxing**

In 1992 allegations of fight-fixing ultimately led to the only federal statute relating to boxing which has been passed in the United States.\textsuperscript{189} On February 8, 1992, in Atlantic City, New Jersey, the IBF middleweight champion James Tomey was defending his title against

\textsuperscript{181} Id.
\textsuperscript{182} Id.
\textsuperscript{183} Id.
\textsuperscript{184} McCain & Nahigian, supra note 1, at 13-14.
\textsuperscript{185} Id.
\textsuperscript{186} Crisco, supra note 61, at 1156.
\textsuperscript{187} McCain & Nahigian, supra note 1, at 14.
\textsuperscript{188} Moore, supra note 3, at 212-13.
\textsuperscript{189} Id. at 213; McCain & Nahigian, supra note 1, at 15-16.
journeyman David Tiberi. Although most experts believed Tiberi had clearly out-boxed Tomey, the judges awarded the bout to Tomey in a split decision. The controversial decision created renewed interest in Congress regarding the regulation of boxing.

Senator William Roth from Tiberi’s home state of Delaware ordered an inquiry by the Senate’s Permanent Subcommittee on Investigations into the allegations of corruption in professional boxing. After hearing testimony from more than one hundred witnesses the Subcommittee found evidence of widespread corruption and influence by organized crime in the sport of professional boxing, and that boxers were being exploited by the promoters and the private sanctioning organizations. Senator Roth worked with Congressman William Richardson from New Mexico to introduce legislation in an attempt to establish uniform regulations in boxing with the hopes of ensuring safety and fairness in the sport. The bill was never passed; this was in part due to congressional inaction and in part due to outside opposition.

In 1994 Senator John McCain and Senator Richard Bryan introduced the Professional Boxing Safety Act (“PBSA”). No action was taken and the bill died. An identical version was then reintroduced and on October 9, 1996 the PBSA, the first major legislation regulating

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190 Crisco, supra note 61, at 1157.
191 Altschuler, supra note 8, at 77 (noting that one television commentator stated that the victory for Tomey was the “most disgusting decision” he had ever seen). Two of the judges in the Tiberi decision were not licensed in New Jersey and unfamiliar with the scoring practices. Crisco, supra note 61, at 1157.
192 Crisco, supra note 61, at 1157.
193 McCain & Nahigian, supra note 1, at 16.
194 138 Cong. Rec. S5663 (1992); Id.
196 McCain & Nahigian, supra note 1, at 17 (noting that joint legislative effort of the two men was introduced as the Professional Boxing Corporation Act).
197 Crisco, supra note 61, at 1158.
198 The Professional Boxing Safety Act, S. 1991, 103d Cong. (1994); McCain & Nahigian, supra note 1, at 19. Senator John McCain boxed while attending the Naval Academy and has been a leader in accomplishing reform in boxing for many years. Joe Maxse, McCain is Still Determined to Reform Boxing; Senator Finally Doing Something to Clean Up Sport, THE HOUSTON CHRONICLE, Feb. 6, 2005 at 3.
199 Id.
professional boxing, was passed.\textsuperscript{200} The PBSA had several provisions which were designed to protect the boxer’s welfare: 1) each boxing match was to be supervised by a state boxing commission, 2) each boxer was to undergo a physical exam by a physician to certify whether the boxer was fit to fight, 3) requirement of an ambulance or medical personnel to be present at the bout throughout its duration, 4) a physician was to be present at the ringside throughout the bout, 5) mandatory health insurance for each boxer to provide medical coverage for any injuries sustained in the bout, and 6) an identification card for each boxer requiring renewal every two years.\textsuperscript{201} The Act also had provisions relating to the regulation of the procedures used by state boxing commissions in their matches.\textsuperscript{202}

The PBSA was the first stage in the reform of boxing and focused primarily on the health of boxers.\textsuperscript{203} The Muhammad Ali Boxing Reform Act (“Ali Act”), an amendment of the PBSA, was passed in 2000 and focused on correcting and preventing the unethical business practices that commonly occurred in boxing.\textsuperscript{204} The Ali Act provides for the following: 1) guidelines for minimum contract provisions to be drafted by the Association of Boxing Commissioners (“ABC”),\textsuperscript{205} 2) protection from coercive contracts between the boxer and the promoter, 3) ABC guidelines for rankings of boxers and requirements of sanctioning organizations to provide rationale for their rankings upon the boxer’s request, 4) Federal Trade Commission filing requirements for sanctioning organizations, 5) required disclosures by sanctioning organizations to the state boxing commissions, 6) disclosure requirements of promoters to the state boxing commissions and 7) required disclosures by judges and referees to the state boxing commissions.

\textsuperscript{201} \textit{Id}.
\textsuperscript{202} \textit{Id}.
\textsuperscript{204} 15 U.S.C. §§ 6301-13 (2000); Moore, \textit{supra} note 3, at 216.
\textsuperscript{205} 15 U.S.C. §§ 6301-13 (2000). The ABC was formed in 1985 as a group of executive directors from state boxing commissions that joined to establish uniform state regulations. This trade organization includes forty-four states and eight Indian tribal commissions. Maxse, \textit{supra} note 198, at 3.
commissions.\textsuperscript{206} Despite the enactment of the PBSA and the Ali Act professional boxing continues to be beset by problems,\textsuperscript{207} and these statutes have not been enforced by federal officials.\textsuperscript{208} Senator McCain and others believe there is a need for more federal regulation of the sport.\textsuperscript{209}

**VI. Current Problems Regarding State Regulation of Boxing**

The state boxing commission is the only organization that has the legislative power to license and regulate a boxing match.\textsuperscript{210} Although federal legislation has brought some improvement to the boxing industry it is clear that the current regulation by the states is inconsistent and in some states virtually nonexistent.\textsuperscript{211} State boxing commissions have come under attack for being run by boards that are appointed for political reasons and are unfamiliar with boxing.\textsuperscript{212} The states with more stringent boxing regulations risk promoters going to other states for their fights and thus losing revenue.\textsuperscript{213} Many states lack sufficiently stringent medical regulations, and because the regulations are not uniform from state to state, forum shopping by the boxer is encouraged.\textsuperscript{214} Additionally, there is no international data base containing the boxer’s medical history for physicians to consult when making decisions regarding the boxer’s

\textsuperscript{206} 15 U.S.C. §§ 6301-13 (2000). The sanctioning organizations must disclose all costs they assess the boxer and payments they receive related to a match. The promoter must disclose their agreement with the boxer, all fees assessed to the boxer, and any benefit the promoter provides to the sanctioning organization associated with the match. Judges and referees must provide the boxing commission in the state where the match is to be held a statement of all the consideration from any source that they will receive for participating in the match. The provisions in the act are enforceable by the United States Attorney General and violation of this act knowingly can lead to a prison term of up to one year and a fine of up to $100,000. 15 U.S.C. §§ 6301-13 (2000).

\textsuperscript{207} Id. at 23 (noting that from 1996 through 2002 no cases were brought by the U.S. Attorney’s offices and no referrals were even made; the main reasons for the lack of enforcement has been lack of resources, lack of interest and the fact that the violations are misdemeanors).

\textsuperscript{208} Id. at 24.

\textsuperscript{209} Id. at 24.

\textsuperscript{210} Fife, supra note 8, at 1305.

\textsuperscript{211} Altschuler, supra note 8, at 83; Id.

\textsuperscript{212} Fife, supra note 8, at 1306.

\textsuperscript{213} McCain & Nahigian, supra note 1, at 16.

\textsuperscript{214} Altschuler, supra note 8, at 83.
Finally, the medical care available to the boxer at the ringside is substandard in many cases.216

A. Inadequate Structure of State Boxing Commissions

Regulation of boxing is left up to each individual state; currently, forty-four states and the District of Columbia license boxing matches.217 In some states the boxing commissioner is politically appointed.218 In Iowa the state labor commissioner regulates boxing matches while in Georgia the secretary of state is the boxing commissioner.219 In New York the commissioner is not paid.220 The boxing commissioner may have no knowledge regarding the sport of boxing yet the boxing commission establishes the state rules, licensing requirements, and appoints judges and referees.221 The executive director of the Nevada State Athletic Commission has acknowledged that the commission is a vehicle for political appointments by the governor.222

Boxing writer Thomas Hauser testified before the Senate on February 5, 2003, noting that “the

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216 Id.
218 Walsh, supra note 4, at 72.
220 Id.
221 Walsh, supra note 4, at 72; McCain & Nahigian, supra note 1, at 16. Senator John McCain has said that many boxing commissioners do not “know a boxing glove from a catcher’s mitt” and that governors use the state boxing commissions as political awards. Fife, supra note 8, at 1306.
222 Fife, supra note 8, at 1306.
entire system is corrupt, and some of the worst enablers are in positions of power at state athletic commissions.”

B. Inherent Conflict of Interest in State Regulation of Boxing

There is also an inherent conflict of interest created when a state regulates boxing. If a state regulates too stringently, promoters and sanctioning organizations may take the bout to another state with more lax regulation. Therefore, states with more stringent regulations stand to lose revenues when a bout is taken elsewhere. Furthermore, the state commissions know that fans want a bloody brawl. Fights that are stopped a round early by the referee or the ringside physician, rather than a round late, are bad for business. For example, in Las Vegas during a four month period between mid-May and September 2005 two boxers sustained life threatening brain injuries and two boxers died as a result of brain injuries. Dr. Margaret Goodman, a neurologist and the chief ringside physician for the Nevada Athletic Commission, was criticized by promoters for stopping fights too soon. Dr. Goodman, along with Dr. Flip Homansky, a physician on the board of the commission, had been advocating for more MRI testing of boxers but when Dr. Homansky was replaced on the board by a non-physician who had donated money to the governor’s campaign, Dr. Goodman resigned as ringside physician in frustration.

223 Murphy, supra note 219 (noting as an example that Tony Alamo Jr. sits on the Nevada Athletic Commission which regulates his father, Tony Alamo Sr., a well-known boxing promoter).
224 McCain & Nahigian, supra note 1, at 16.
225 Id.
226 Id.
228 Id.
229 Id.
230 Erin Neff, Fight Doctors?, LAS VEGAS REVIEW-JOURNAL, Jan. 5, 2006 at 7B.
231 Id.; Selena Roberts, Congress Takes a Pass on the Needs of Boxers, THE NEW YORK TIMES, Dec. 11, 2005 at 1. Dr. Homansky had served as a ringside physician for two decades and also as the commissioner for two terms. Neff, supra note 230, at 7B.
C. Variations in State Medical Requirements

States vary regarding their medical requirements and medical care for boxers. In Connecticut each boxer is required to undergo a complete physical exam, a complete eye exam including dilation, an electrocardiogram, computerized tomography (“CT”) or magnetic resonance imaging (“MRI”) of the brain, pre and post fight physicals and blood testing. Some jurisdictions require nothing more than an abbreviated pre-fight physical exam thereby exposing the boxer to harm on the basis of an undiscovered medical condition. The medical advisory board of the ABC developed medical testing requirements in 2003, and although the American Association of Professional Ringside Physicians has endorsed the requirements most jurisdictions have not adopted them. This has led to forum shopping by boxers who are precluded from boxing in a state due to a pre-existing medical condition; the boxer can then apply to fight in a state which does not have such requirements in place.

D. Lack of an International Medical Registry

Currently there is no international data bank or registry to document and maintain a boxer’s medical history. Medical information therefore, may not be available to the ringside physician or the physician performing the pre-fight evaluation. In the case of boxer Stefan Johnson the use of a regulated up-to-date international medical registry might have prevented his...
death. Johnson sustained a serious knockout in a bout in Canada and was placed on suspension pending medical clearance. The PBSA rules that a boxer who sustains a knockout is placed on suspension and is not permitted to fight in any state. Nevertheless, presumably because the knockout occurred in Canada and not in the United States, the South Carolina Athletic Commission allowed Johnson to fight shortly thereafter. In addition to the known knockout, Johnson had a head CT scan which documented intracranial bleeding prior to fighting in South Carolina. In spite of this Johnson was then allowed to fight in New Jersey, where he died in the match. In addition to the medical concerns that an international registry would address, it is of very practical value; some boxers, unable to document a prior test, must bear the cost of repeating the test.

E. Ringside Physicians and Emergency Medical Care

The PBSA requires that a physician be continuously present at the ringside but states vary in the manner in which this regulation is followed. Some states do not use a neurologist or neurosurgeon as a ringside physician but instead use physicians trained in inappropriate specialties such as dermatology or obstetrics. These are physicians who do not specialize in treating patients with brain injuries and may not have received any training to be ringside

241 Symposium, Boxing at the Crossroads, supra note 239, at 194.
242 Id. at 225.
243 Id. at 194, 235 (noting that Stefan Johnson knew that he was injured but apparently wanted to fight for one more payday).
244 Statement of Dr. Michael B. Schwartz, Chairman The American Association of Professional Ringside Physicians to the Subcommittee on Commerce, Trade, and Consumer Protection, supra note 215 (noting that a physician performing several pre-fight physicals received the same electrocardiogram on each boxer because the manager had used “white-out” to put different names on copies of the same test).
245 15 U.S.C. § 6304 (1996); Id.
physicians. Reportedly states have used veterinarians and chiropractors as ringside physicians. In Ohio, two physicians who performed pre-fight physical evaluations and acted as ringside physicians for several years were not licensed to practice medicine.

Some matches take place without an ambulance at the site of the fight. An ambulance or emergency medical personnel on site, but not both, is the minimum requirement established by the PBSA. An ambulance was not present at the site of a match held in Kentucky on March 9, 2001. Forty-two year-old former heavyweight champion, Greg Page, collapsed in the tenth round during a fight with twenty-four year-old Dale Crowe. A significant period of time was lost while an ambulance was summoned. The ringside physician was not licensed to practice medicine in Kentucky, had not previously worked as a ringside physician, and had just previously had his medical license suspended in Ohio. Page underwent brain surgery but remains severely hemiparetic and unable to walk without assistance. The Kentucky Athletic Commission not only failed to provide an ambulance but there is evidence that there were inadequate medical personnel and resuscitation equipment on site. Nancy Black, the executive director of the Commission at the time of the Page fight in March 2001, had never attended a

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247 Id.
248 Id.
249 Fife, supra note 8, at 1306.
251 15 U.S.C. § 6304; Id.
252 McCain & Nahigian, supra note 1, at 28.
253 Id.
254 Id.
255 Tim Smith, Fight of His Life: Tragic Night Haunts Greg Page, DAILY NEWS, July 25, 2004 at 106 (noting that at the end of the fight the physician, Dr. Manuel Mediodia, reportedly placed an ammonia cap under the nose of Page as he lay slumped over the rope in the ring and pronounced the fighter “exhausted” before leaving the ring).
256 McCain & Nahigian, supra note 1, at 28-29 (noting that Page earned $1500 for this last fight). A hemiparesis is weakness which affects one side of the body. STEDMAN’S MEDICAL DICTIONARY, supra note 142, at 775.
professional boxing match.\textsuperscript{258} In June 2005, more than four years after the Page fight the Kentucky Athletic Commission had not enacted any new boxing safety regulations.\textsuperscript{259}

Another example of poor state regulation occurred in Cedar City, Utah, two years later.\textsuperscript{260} Bradley Rone, a thirty-four year-old boxer had lost twenty-five consecutive fights in the three years prior to this July 2003 fight.\textsuperscript{261} Just one month before, Rone had fought the same opponent and had been defeated.\textsuperscript{262} Overall, Rone had a record of seven wins, forty-two losses and three draws, but in spite of this record Rone was granted a license to fight by the Utah Athletic Commission.\textsuperscript{263} He collapsed after the first round and died in the ring.\textsuperscript{264}

\section*{VII. Solutions: Decreasing the Morbidity and Mortality in Boxing}

Boxing-related morbidity and mortality could be eliminated by banning professional boxing.\textsuperscript{265} Although many medial organizations have advocated banning the sport,\textsuperscript{266} and several countries have successfully banned professional boxing,\textsuperscript{267} such action is unlikely to be successful in the United States.\textsuperscript{268} Boxing is a lucrative industry\textsuperscript{269} and proponents have argued that the boxer knowingly accepts the risk of injury or death by stepping into the ring.\textsuperscript{270} In most cases the injured boxer must prove the defendant acted intentionally or recklessly in order to

\begin{thebibliography}{99}
\bibitem{258} Fife, \textit{supra} note 8, at 1306 (noting that Ms. Black stated that “on boxing itself, I can’t say that I’m an expert.”).
\bibitem{259} Jim Adams, \textit{Boxing Authority Considers Changes in State Regulations}, THE C\textit{OURIER-JOURNAL}, June 22, 2005, at 1B.
\bibitem{260} McCain & Nahigian, \textit{supra} note 1, at 29.
\bibitem{261} Id.
\bibitem{262} Id.
\bibitem{263} \textit{Id.} (noting that boxers like Rone are referred to as “professional losers” and they are used to improve the records of stronger up-and-coming boxers); Maxse, \textit{supra} note 198, at 3.
\bibitem{264} McCain & Nahigian, \textit{supra} note 1, at 29.
\bibitem{265} Flannery & O’Brien, \textit{supra} note 4, at 435.
\bibitem{267} Sweden’s Boxing Ban on the Ropes (Sept. 6, 2005), at http://64.233.179.104/search?q=cache:ZeY9kYHmU0J:www.thelocal.se/discuss/viewtopic.php%3Ft%3D45+norway+cuba+north+korea+banning+Boxing++&hl=en&gl=us&ct=clnk&cd=1.
\bibitem{268} Groschel, \textit{supra} note 48, at 935, 937.
\bibitem{269} \textit{Id.}
\bibitem{270} Forman, \textit{supra} note 17, at 82.
\end{thebibliography}
prevail in court.\textsuperscript{271} Short of a boxing ban, brain related injuries and death could be decreased by changing the rules of the sport.\textsuperscript{272} However the most likely method of successfully bringing about reform would be the establishment of a single federal regulatory administration to oversee boxing.\textsuperscript{273} Senator John McCain introduced legislation to establish this central administration and it was passed by the Senate but failed to pass in the House of Representatives.\textsuperscript{274} Federal regulation to establish needed medical guidelines still remains the most viable mechanism for effective reform in the sport of professional boxing.\textsuperscript{275}

A. Ban Boxing

Injuries and deaths secondary to boxing can be prevented by completely banning the sport.\textsuperscript{276} Opponents of boxing state that the principal purpose of the boxer is to injure, kill, incapacitate or render the opponent unconscious.\textsuperscript{277} Boxing is the only sport in which the primary intent is to injure the opponent’s brain.\textsuperscript{278} Aligned with the medical argument against boxing stands the moral argument that it is wrong to engage in a sport in which the only goal is to cause a physical injury.\textsuperscript{279} Many medical associations have policies against boxing including the American Medical Association (“AMA”), the World Medical Association, the British Medical Association and the Australian Medical Association.\textsuperscript{280} In 1984 the American Medical

\textsuperscript{271} Classen v. Izquierdo, 520 N.Y.S.2d 999, 1000 (N.Y. Sup. Ct. 1987).
\textsuperscript{272} George D. Lundberg, Boxing Should be Banned in Civilized Countries-Round 2, 251 JAMA 2696-97, 2697 (1984); Robert Glenn Morrison, Medical and Public Health Aspects of Boxing, 255 JAMA 2475-2480, 2479 (1986).
\textsuperscript{273} McCain & Nahigian, supra note 1, at 30.
\textsuperscript{275} McCain & Nahigian, supra note 1, at 33.
\textsuperscript{276} Lundberg, supra note 272, at 2696.
\textsuperscript{277} Maurice W. Van Allen, Boxing Should be Banned in Civilized Countries, 249 JAMA 250-51, 250 (1983). In other sports head injuries are incidental to the sport rather than being an objective. Stuttaford, supra note 120, at 1.
\textsuperscript{278} Morrison, supra note 272, at 2479.
\textsuperscript{279} George D. Lundberg, Boxing Should be Banned in Civilized Countries-Round 3, 255 JAMA 2483-2485, 2484 (1986).
\textsuperscript{280} English, supra note 266.
Association’s House of Delegates passed a resolution to encourage the elimination of professional and amateur boxing.\footnote{Lundberg, supra note 279, at 2483.} Sweden banned professional boxing in 1969,\footnote{Y. Haglund et al., Does Swedish Amateur Boxing Lead to Chronic Brain Damage? I. A Retrospective Medical, Neurological and Personality Trait Study, 82 ACTA. NEUROL. SCAND. 245-52, 245 (1990) (noting that amateur boxers are allowed to fight only after reaching the age of fifteen).} and although amateur boxing is allowed, there is very strict medical supervision of these boxers.\footnote{Robert Ludwig, Making Boxing Safer: The Swedish Model, 255 JAMA 2482, 2482 (1986).} Only three other countries, Norway, Cuba and North Korea have banned professional boxing.\footnote{Sweden’s Boxing Ban on the Ropes, supra note 267.}

**B. Banning Boxing is Unlikely to be Successful**

Twenty years ago in a Journal of the American Medical Association (“JAMA”) editorial one physician predicted that most states would ban boxing by 2000.\footnote{Lundberg, supra note 279, at 2484.} This prediction has obviously not come to pass. The main reason a ban on boxing is unlikely to be supported in the United States is the economics of boxing. Boxing is a multi-billion dollar business, and recent changes in the technology of television have made boxing very lucrative.\footnote{Groschel, supra note 48, at 935, 937; Altschuler, supra note 8, at 75.} Closed circuit broadcasts and pay-per-view subscriptions have increased the number of viewers and increased the profit margins for each televised event.\footnote{Id.} The largest money making event in boxing history was the June 28, 1997 match between Evander Holyfield and Mike Tyson.\footnote{Id.} Domestically, this event grossed over one hundred million dollars in one night on pay-per-view.\footnote{Id.} The record for the largest live gate revenue was set on June 8, 2002 when Mike Tyson fought Lennox Lewis.\footnote{Welcome to the Prize Fight Web Site at http://72.14.203.104/search?q=cache:-1lpxfe-W2IJ:www.prizefightpromoters.com/Quick%2520Facts.htm+largest+grossing+professional+boxing+match&hl=en&gl=us&ct=clnk&cd=2 (last visited Mar. 12, 2006) (noting that receipts totaled $17,200,000).}
Unfortunately, Americans are very accepting of violence in sports and they will continue to support boxing.\textsuperscript{291} Professional football, for example, is one of the most popular sports in this country and also one of the most violent. Boxing is even more violent and fans want to see a bloody match.\textsuperscript{292} They enjoy the aura of death in the sport, and that is what sells tickets.\textsuperscript{293} Based on economic considerations, the powerful promoters and sanctioning organizations will succeed in preventing Congress from passing a ban on boxing. Banning boxing would also make the sport even more unsafe. The sport would continue underground with poor or non-existent medical supervision.\textsuperscript{294} The attraction of the sport for some people may also be increased by its being forbidden.\textsuperscript{295}

\textbf{C. Support for the Sport of Boxing}

Those supporting boxing have relied to some degree on the assumption of risk doctrine.\textsuperscript{296} By stepping into the ring the boxer consents to all contacts that are permitted by the rules of the match.\textsuperscript{297} A boxer knows that by entering a match he is likely to receive numerous blows to the head, and therefore, it is foreseeable that he will sustain a debilitating brain injury or die.\textsuperscript{298} Although courts have disagreed on whether the boxer consents to all foreseeable acts of his opponent,\textsuperscript{299} in most cases the assumption of risk doctrine will prevent the injured plaintiff from prevailing although it may not be an absolute bar to recovery.\textsuperscript{300} If the defendant’s conduct

\begin{itemize}
  \item \textsuperscript{291} Walsh, \textit{supra} note 4, at 64.
  \item \textsuperscript{292} Matthews, \textit{supra} note 227, at A57.
  \item \textsuperscript{293} \textit{Id.}
  \item \textsuperscript{294} Rosen, \textit{supra} note 126, at 618.
  \item \textsuperscript{296} Forman, \textit{supra} note 17, at 82.
  \item \textsuperscript{297} \textit{Id.}
  \item \textsuperscript{298} \textit{Id.} at 83.
  \item \textsuperscript{299} \textit{Id.} (noting that injuries in violation of the rules, such as head-butting or gouging of the eyes are frequent and foreseeable).
  \item \textsuperscript{300} \textit{Id.}
\end{itemize}
is willful, malicious or grossly negligent, the plaintiff may prevail but proving such conduct by
the defendant may be very difficult.\textsuperscript{301}

In the case of \textit{Classen v. Izquierdo}, boxer Willie Classen received a number of blows to
the head during a match.\textsuperscript{302} At the end of the ninth round the ringside physician, defendant
Izquierdo, checked Classen and determined that Classen was able to continue to fight.\textsuperscript{303} Within
seconds after the tenth round began Classen received a blow to the head and was rendered
unconscious.\textsuperscript{304} He sustained a subdural hematoma and in spite of treatment he died five days
later.\textsuperscript{305} Classen’s widow sued Izquierdo alleging negligence on the basis of a malfunctioning
oxygen tank and the lack of an available ambulance.\textsuperscript{306} The defendant argued due care was
exercised and also that the plaintiff assumed the risks inherent in boxing including negligence on
the part of the defendant.\textsuperscript{307} Izquierdo was not granted summary judgment and the court held
that a physician’s duty to provide care within accepted standards was the same in the boxing ring
as in other settings.\textsuperscript{308} The court’s holding is reasonable given that the physician was providing
care just as he would at his office, clinic or a hospital. The other defendants in the case, Madison
Square Garden Center, Inc. and Madison Square Garden Boxing, Inc., had their motion for
summary judgment granted.\textsuperscript{309} The court held that these defendants were not liable to Classen
because any injuries he sustained were reasonably foreseeable as a consequence of his

\textsuperscript{301} Id. at 83, 86.
\textsuperscript{302} Classen, 520 N.Y.S.2d at 1000.
\textsuperscript{303} Id.
\textsuperscript{304} Id.
\textsuperscript{305} Id.
\textsuperscript{306} Id.
\textsuperscript{307} Id.
\textsuperscript{308} Id. at 1001.
\textsuperscript{309} Id. at 1002.
Most defendants will not be liable for acts of negligence and will only be liable for injuries caused by intentional or reckless acts.\textsuperscript{311} Although intentional and reckless conduct is difficult to prove, the case of \textit{Collins v. Resto} demonstrates a situation in which such egregious conduct was found on the part of the defendants: they were the boxer Luis Resto and Resto’s trainer, Carlos “Panama” Lewis.\textsuperscript{312} Lewis had removed padding from the interior of Resto’s glove leading to career-ending head and eye injuries sustained by Collins.\textsuperscript{313} Madison Square Garden provided the venue and security for the event and was not found liable.\textsuperscript{314} Barring an unusual circumstance in which a defendant is found to have acted intentionally or recklessly the plaintiff, particularly if he is an experienced boxer, will be held to have assumed the risks inherent in boxing.\textsuperscript{315} Assuming that the boxer understands the inherent dangers of stepping into the ring, the negligence standard which is applied to physicians should be applied to all individuals involved in the match. Because of the potential for devastating brain injuries or death it is imperative to require that the participants act with reasonable care in their duties related to the match. Therefore, liability should be expanded to insure that all the participants act reasonably thus offering the boxer more protection.

Proponents of boxing assert that boxing requires intense dedication and discipline and leads to the development of stamina and courage in the individual boxer.\textsuperscript{316} The boxer may argue that the goal of boxing is not to injure the opponent’s brain but rather to demonstrate agility, speed and strength. It could be argued that these traits are just as easily developed in other less violent sports such as cycling, swimming or basketball. Additionally, boxing

\begin{footnotes}
\item[310] Id.
\item[311] Id. at 1000 (noting that this rule does not apply to physicians).
\item[313] Id. at 360.
\item[314] Id. at 363.
\item[315] Forman, supra note 17, at 89.
\end{footnotes}
proponents note that the risk of head injuries in boxing is less than some other sports. Proponents of this argument are looking at a single event, and fail to take into account another significant risk of boxing: the repeated blows to the head that in the aggregate lead to chronic disability. Arguably the most compelling argument in favor of boxing is the freedom of an individual to pursue an important goal. The boxer makes a choice based on his own desires and values. Banning boxing in essence tells the boxer that his goal cannot be pursued because other individuals with more knowledge, more education or more power know what is best. The fact is many people’s liberties are curtailed, and one such example is the institution of state motorcycle helmet laws to decrease the incidence of brain injuries and deaths of motorcyclists.

D. Ways to Improve the Safety of Boxing

Increasing public awareness regarding the medical risks associated with professional boxing may help to promote change in the sport. In particular, children and adolescents of both sexes should be provided with information in school programs that detail the risks associated with all sports so that with their parents they can be better informed in making such decisions. Although most studies and research involving morbidity and mortality in boxing have focused on male boxers, women have joined the sport increasingly over the past thirty years. In 1975 the first documented boxing license in the United States was issued to a woman in Las

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317 Id. Sports with higher fatality rates than boxing include horse-racing (128 fatalities per 100,000 participants), sky-diving (123 fatalities per 100,000 participants), hang-gliding (55 fatalities per 100,000 participants), mountaineering (51 fatalities per 100,000 participants), scuba diving (11 fatalities per 100,000 participants), motorcycle racing (7 fatalities per 100,000 participants), and college football (3 fatalities per 100,000 participants). The Anti-Boxing Lobby, supra note 156.
318 Unterharnscheidt, supra note 101, at 1027.
320 Id.
321 Id.
322 Morrison, supra note 272, at 2479.
In October 1999 Laila “She-Bee Stinging” Ali, Muhammad Ali’s daughter, made her professional boxing debut in New York. As more women join the sport it is crucial that the risk of brain injuries and brain related deaths be explained to them as well as their male counterparts.

Changes could also be made in the rules of boxing to decrease the incidence of brain injury and death. Punches to the head and neck could be banned just as punches below the belt are banned. This rule would decrease the brain related morbidity and mortality but would likely increase the incidence of intra-abdominal injuries as well as damage to the kidneys and lungs. Also, this rule would drastically change the sport and this form of boxing would be less satisfying to the many boxing fans looking for the knockout punch.

Arguably, if boxers did not use gloves and instead fought bare-handed the likelihood of increased pain and injuries to the hands would lead to a decrease in the intensity and number of punches delivered to the head. This change would also alter the sport dramatically and is unlikely to be accepted by the boxing industry or the fans. Increasing the padding in the gloves, the corner posts and the canvas floor may lessen the trauma to the boxer’s head. The wearing of headgear may decrease the incidence of head injuries, although it will not lead to the elimination of brain injuries or brain related deaths. Headgear is used in the training of

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324 Id. (noting that Caroline Svendsen received a license and had a four-round match in Virginia City, Nevada the same year).
325 Id. (noting that her entry into the sport drew tremendous media attention).
326 Lundberg, supra note 272, at 2697.
327 Morrison, supra note 272, at 2479.
328 Id.
329 Id.
330 Rosen, supra note 126, at 616.
330 Morrison, supra note 272, at 2479 (noting that headgear is required in amateur boxing). On April 3, 2005 Becky Zerlentes became the first woman to die in a boxing match sanctioned in the United States. The thirty-four year old Zerlentes was wearing protective headgear when she received a blow to the left temple. She was rendered unconscious and sustained an intracranial hemorrhage but died despite emergency surgery to remove the hemorrhage. First Female Boxing Death occurs in US Sanctioned Match (Apr. 6, 2005), at http://72.14.203.104/search?q=cache:WhqweSnLvYJ:en.wikinews.org/wiki/First_female_boxing_death_occurs_in_US_sanctioned_match++women+professional+boxing+first+death&hl=en&gl=us&ct=clnk&cd=7.
professional boxers and former heavyweight champion George Foreman, weighing in on the issue, has stated that headgear should be mandatory in professional boxing. A heavyweight champion may have to step up and demand headgear in professional boxing for this measure to be instituted. Decreasing the number of rounds from twelve to six is likely to decrease the morbidity and mortality associated with boxing. Compared to professional boxers, amateur boxers fight three rounds and therefore receive fewer blows to the head; consequently, the morbidity and mortality rate is lower for amateur boxers than professional boxers.

E. Unionizing Boxing

Boxers could help to bring about reform by unionizing. By forming a centralized league or association boxers could establish rules and regulations regarding health insurance and pension plans. The union could also develop standardized contracts on a single fight basis to prevent the long term contracts that currently bind the boxer to a particular promoter. Limitations on fees charged by managers could also be instituted. The concept of a boxing union has been discussed for more than forty years but boxers are a diverse group and many do not see the benefit of having a union or feel it will be to costly, and so they have been unable to

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331 Lennox McLendon, Prevent More Boxing Tragedies with Headgear, USA TODAY, May 23, 1995 at 12A (noting that promoters don’t like the idea because they believe it would reduce public interest in boxing).
332 Id. (noting that hockey goalie Jacques Plante was hit in the face with a puck in 1959 and returned to hockey wearing a helmet and a crude mask and that soon all goalies were wearing masks and all players were wearing helmets).
333 Morrison, supra note 272, at 2479.
334 Id.
337 Id.
338 Maese, supra note 12.
come to an agreement on the structure and goals of a boxing union.\textsuperscript{339} Unfortunately, unionization is unlikely to occur.

\textbf{F. Federal Regulation of Boxing}

Boxing is the only major sport that lacks a central regulatory organization.\textsuperscript{340} Even individual sports such as tennis, bowling and golf have national commissions so that the rules in one venue are the same in another.\textsuperscript{341} Instead, boxing is regulated inconsistently by the states; rules and enforcement vary widely, leading to mismatches, inappropriate licensing and related injuries and death.\textsuperscript{342} Privatization is unlikely to work because boxing does not lend itself to a single private league structure.\textsuperscript{343} It is unlikely, with the many different weight classes and the great disparity among the superstar boxers and the lesser-known boxers, that a single league can be formed.\textsuperscript{344} Therefore, the best solution remains the legislation of a federal organization to regulate boxing.\textsuperscript{345} The establishment of federal uniform medical guidelines for boxers would lead to a decrease in morbidity and mortality in the sport.\textsuperscript{346}

Senator John McCain introduced the Professional Boxing Amendments Act (“PBAA”) in 2002 in an effort to strengthen existing federal boxing laws and to establish uniform medical standards.\textsuperscript{347} The legislation would also establish a federal regulatory organization, with a centralized medical registry to be used by state boxing commissions, abolish arbitrary ranking practices by sanctioning organizations and set forth guidelines for contracts drafted for bouts.\textsuperscript{348}

\begin{flushleft}
\textsuperscript{339} \textit{Id.}; Manning, \textit{supra} note 12.
\textsuperscript{340} Flannery & O’Brien, \textit{supra} note 4, at 437.
\textsuperscript{341} \textit{Statement of Dr. Michael B. Schwartz, Chairman The American Association of Professional Ringside Physicians to the Subcommittee on Commerce, Trade, and Consumer Protection, supra} note 215.
\textsuperscript{342} Flannery & O’Brien, \textit{supra} note 4, at 437; McCain & Nahigian, \textit{supra} note 1, at 28.
\textsuperscript{343} Altschuler, \textit{supra} note 8, at 85.
\textsuperscript{344} \textit{Id.}
\textsuperscript{345} McCain & Nahigian, \textit{supra} note 1, at 30.
\textsuperscript{346} Walsh, \textit{supra} note 4, at 64.
\textsuperscript{347} S. 275 21; McCain & Nahigian, \textit{supra} note 1, at 30.
\textsuperscript{348} S. 275 21; McCain & Nahigian, \textit{supra} note 1, at 30.
\end{flushleft}
Senator McCain proposed that the federal entity created by this legislation be called the United States Boxing Administration ("USBA"). The USBA would have a centralized confidential data base of boxer’s medical information to be used by any state commission in making fight decisions. The USBA would also have a registry containing boxing related information on the promoters, managers, trainers, referees and judges, and would have the power to license boxers, promoters, managers and sanctioning organizations. The USBA would also have the power to suspend or revoke the license of any participant in the event of a violation. The bill passed in the Senate by unanimous consent on March 31, 2004. On November 16, 2005 the bill was voted on by the House of Representatives and failed to pass.

I spoke with Pablo Chavez, Chief Counsel for Senator McCain, and he noted that two groups opposed the bill. Many Republicans were in opposition because they believed five million dollars per year for a boxing commission was too much money to spend. The Democrats opposing the bill were influenced by the boxing industry. Chavez noted that the promoters and the sanctioning organizations are happy with the status quo and are not interested in reform. He also noted that Senator McCain, although still interested in reforming boxing, is not sure what his next step will be in order to achieve boxing reforms.

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349 S. 275 21; McCain & Nahigian, supra note 1, at 30. At least one member of the USBA should be a medical expert regarding boxing. Fife, supra note 8, at 1314.
350 S. 275 21; McCain & Nahigian, supra note 1, at 31.
351 S. 275 21; Moore, supra note 3, at 221.
352 S. 275 21; McCain & Nahigian, supra note 1, at 30.
353 S. 275 21; McCain & Nahigian, supra note 1, at 30.
354 McCain & Nahigian, supra note 1, at 32.
355 109 Congress H.R. 1065: United States Boxing Commission Act, supra note 274 (noting that the totals were 190 voting for and 233 voting against the bill).
356 Telephone Interview with Pablo Chavez, Chief Counsel for Senator John McCain (Mar. 3, 2006).
357 Id.
358 Id.
359 Id.
360 Id.
Critics of federal regulation of boxing raise a constitutional challenge to federal control of the sport. This challenge would likely fail. A boxer commonly will travel from state to state to fight an opponent and improve his ranking; therefore, even local professional bouts will have an impact on interstate commerce. Many championship matches are promoted across the United States and coupled with the sale of television rights; this constitutes interstate commerce. Additionally, although critics of federal regulation claim no sport has ever been subject to the comprehensive control that would be established by the PBAA, federal intervention into sports in the United States is not a new phenomenon. Currently, the federal government regulates wagering on horse races. In 2004 when officials for Major League Baseball ("MLB") announced new rules for steroid testing of players some legislators were unhappy with the perceived leniency of the new steroid testing policy. Senator John McCain had warned MLB that Congress would take action if appropriate steroid testing was not instituted, and legislation was introduced in Congress to stiffen the penalties for steroid use by professional baseball players. Shortly thereafter MLB revised its testing policy to make it more stringent.

It is clear that the current system in which states control boxing is medically unsafe and ineffectual. Federal regulation and a central national administration is the only remedy to address the long standing status quo in professional boxing. In April 2005 the Senate passed

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361 Fife, supra note 8, at 1319.
363 Fife, supra note 8, at 1319.
364 Id. at 1318.
365 Id. at 1322.
366 Id.
368 Id.
369 Id.
370 Id.
371 McCain & Nahigian, supra note 1, at 33.
legislation regarding animal fighting in an attempt to control cockfighting. Seemingly the health and welfare of professional boxers should also be worthy of protective federal regulations. But some politicians questioned whether legislation such as the PBAA would promote government waste. According to the Congressional Budget Office the USBA would cost approximately $34 million over a five-year time period. The money to support a national boxing administration would not necessarily have to cause an increase in the federal budget. This money could be raised by imposing a tax on pay-per-view sales to fund an administration. Alternatively, a tax on wagers placed on boxing matches could be instituted to fund the administration. Furthermore, the cost of a central administration should be weighed against the costs to society in providing for the long-term care of injured boxers.

G. Additional Needed Regulations

Physicians with expertise regarding brain trauma, such as neurosurgeons, should join with legislators to draft regulations which focus on the medical care and health of boxers. The AMA should abandon the unrealistic goal of banning boxing and work with Senator McCain and other legislators to establish these regulations. By initially focusing on the medical concerns in professional boxing rather than the economic concerns, conflicts regarding the financial interests of the promoters and sanctioning organizations may be minimized. This medical focus may also decrease bipartisan rivalry that often accompanies the legislative process. The administering board established by this legislation should include a minimum of two physician who have

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373 Moore, supra note 3, at 226.
374 Id.
375 Id. at 227.
experience and training regarding brain injuries, and I feel at least one should be a neurosurgeon with a minimum of two years’ clinical experience.

The boxing administration should establish detailed medical insurance and disability plans for professional boxers.376 A pension plan should also be instituted to help alleviate the pressure some boxers feel to keep fighting to achieve financial responsibility.377 The law could provide for a pension plan for any boxer that had fought a designated minimum number of bouts.378 Additionally the creation of a disability fund for injured boxers funded by the proceeds from ticket sales would ensure the availability of long-term care.379 Limitation on the number of rounds in which a boxer can fight should be instituted to lessen the likelihood of brain injuries.380 Boxers that have fought a minimum of ten bouts and lost 40% or more of the bouts should not be re-licensed. It is imperative that “professional losers” such as Bradley Rone not be used basically as punching bags to improve the records of “up-and-coming” boxers.

The boxing administration should also incorporate regulations regarding the appointment of experienced judges and referees.381 The judges and referees would receive mandatory education regarding their duties and should be required to pass standardized tests.382 In addition, a minimum level of experience should be required before they are allowed to judge and referee bouts unsupervised.383 Continuing education should also be mandatory, as well as their removal or suspension for incompetence or failure to abide by the regulations.384

376 Fife, supra note 8, at 1325.
377 Id.
378 Id.
379 Morrison, supra note 272, at 2480.
380 Rosen, supra note 126, at 635.
381 Altschuler, supra note 8, at 82.
382 Id.
383 Id.
384 Id.
An ambulance or emergency medical personnel on site, but not both, is the current minimum requirement that was established by the PBSA. New regulation should stipulate that both be available on site. From a neurosurgical viewpoint it clear that both are necessary and one is not a substitute for the other. Additionally, a hospital in close proximity to the site of the boxing match with the capability of treating severe head injuries should be designated in advance. The hospital should be on alert, have a CT scanner available and working, and be ready to treat the boxer as needed. A neurosurgeon must be available on call and ready to go to the hospital to provide prompt treatment. Having these measures in place would have helped boxer Greg Page after he collapsed in the tenth round of his 2001 fight. Page was taken from Peel’s Palace, the location of the bout, by ambulance to a Covington, Kentucky hospital which did not have a trauma unit. En-route Page had gone into cardiac arrest. The rescue personnel were obliged to take Page across the Ohio River to the University of Cincinnati Hospital. By the time he reached the operating room more than two hours had been lost since his collapse.

Currently, a licensed physician is required to be at the ringside for the duration of the fight. There are no requirements regarding the training or experience of that licensed physician. Clearly the physician should be a neurologist, neurosurgeon, or an internist who has received extensive training regarding neurological injuries. Special instruction regarding boxing and ringside medicine should be mandatory for all ringside physicians. Continuing medical education as it relates to boxing injuries should also be mandatory for these physicians, and they

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386 Smith, supra note 255, at 106.
387 Id.
388 Id.
389 Id.
390 Id.
391 Id.
392 Id.
should undergo a period of supervision by a qualified ringside physician before being allowed to provide unsupervised ringside medical care. Furthermore, the ringside physician should evaluate the boxer in the fourteen days prior to the match to establish the boxer’s baseline physical and mental status. By doing so the physician is able to better recognize any significant deviations from the boxer’s baseline status during the fight. If the physician believes it is in the best interest of the boxer to end the fight the physician will have the discretion to do so without liability. Each state should have a designated group of physicians fulfilling these requirements to call upon as evaluating, treating, and ringside attendant physicians.

I believe standardized medical evaluations should be established for all professional boxers. Such a regimen would include annual brain MRI’s to diagnose any intracranial injury. Early evidence of developing chronic injuries could be demonstrated. Fourteen days prior to a match the fighter should undergo a complete physical exam with pertinent blood tests. The boxer should be instructed on medications to avoid during that two week period. A head CT scan should also be obtained in that two week period to rule out any recent injury that would prevent the boxer from fighting. In the week after the match the boxer should have a head CT scan to rule out injury. All of this medical information would be placed in the central data bank.\textsuperscript{393} Not only should this information be available to the state commissions,\textsuperscript{394} but it should also be available to the ringside physicians and the physicians evaluating the boxers before and after the match. The current regulations provide no guidance regarding the duration of suspensions from boxing for a knockout and for injuries found on diagnostic scans. I believe any boxer sustaining a knockout or found to have any brain abnormality on a diagnostic scan should be seen by a neurosurgeon for treatment and recommendations regarding the duration of the

\textsuperscript{393} S. 275 21; McCain & Nahigian, supra note 1, at 30.

\textsuperscript{394} Id.
suspension. Finally, the administration should actively enforce the regulations, and stiffer penalties for violation of the regulations should be instituted by designating violations as felonies instead of misdemeanors.

VIII. Conclusion

In 1964 Bob Dylan wrote a song about world featherweight champion Davey Moore who died in 1963 after a fight with Ultiminio (“Sugar”) Ramos at Dodger Stadium in Los Angeles, California. The song implicates all the parties involved in the match from the referee to the fan, while each party disavows any blame. The finger pointing shows how little progress has been made in forty-two years. It is widely accepted that the current laws are ineffective. The federal government has turned its back on the sport of professional boxing. The boxers, among all those active in the sport, are the centerpiece of the sport. The health and welfare of the boxers therefore should be the priority in reforming the sport. But for the monetary power of certain special interest groups, boxers might have enjoyed better health, longer life, and better living standards for themselves and their families many years ago. A federally controlled boxing administration is the only logical and feasible mechanism for bringing about the necessary reform. The time has come to end the exploitation of boxers.

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395 Maese, supra note 12.  
396 Id.  
397 Id.  
398 Id.