

Is Football in Trouble?

By Robert J. Kniskern

A Quest paper

Delivered 10/10/14

The title of my quest topic is, “Is football in trouble”. I have to confess that when I first got the topic earlier this year, I was already somewhat aware of the number of controversies around football, but I had no idea that by the time I would be presenting this Quest paper that this topic would be so prominent in the current news and that in the minds of some the question of whether or not football is in trouble may have already been decided. However, be patient with me during the paper as I explore my topic and discuss some of the issues that seem to be impacting the sport, and I will attempt to add some additional perspective to what you may already know. In spite of the current activity in the press about a variety of issues affecting football, I think it is safe to say that many of these issues have been known for a while, although I have to confess each day the news reveals additional revelations that are still surprising.

As I was doing my research on this paper, I was reminded about the title of one of my favorite Clint Eastwood movies, the good, the bad and the ugly, and it seemed to fit as a kind of a theme winding through my topic. My paper will begin with an overview of the history of American football and how it evolved into the game we know today. I'll move on to exploring the “good” side of football and what are some of the more positive aspects of the sport. Then I will be exploring the “bad” aspects of the sport, trying to focus hopefully less on value judgments but will try to focus on some of the very specific and quantifiable issues that many people would consider bad.

I will also review and spend some time on issues that are easily called “ugly”, and while some of these may be issues of variable importance depending on your current viewpoint, I think it's

pretty safe to consider that many of these issues are clearly ugly. In my conclusion I will share some of my personal overall observations on this topic.

In beginning an overview of the history of football, we have to actually clarify what football is and what it is not. What is now called American football was a new game created in America by incorporating a combination of rugby and soccer, both of those sports being quite popular in Europe in the late 1800's. The birthdate of American football is generally acknowledged as November 6, 1869 when Princeton University and Rutgers University met for the first intercollegiate football game. Football at that time had 20 players on each team and the rules of the game were much closer to rugby than that which we now know today as American football. Experimenting with rule changes was very common and many early rule changes had the goal of trying to improve the excitement of the game, or modifying the safety parameters of the game. By 1873, Columbia, Princeton, Rutgers, and Yale, had created the Intercollegiate Football Association, the IFA, and set the number of players on each team to be 15.

In those early years, Yale University was very influential in the sport. They had a very influential coach, named Walter Camp, and he helped drive some of the important rule changes that helped the original rugby style game evolve into what we now recognize as modern American football. Walter helped reduce the number of players on a team to 11, introduced the concept of "downs", and established the size of the playing field as a standardized gridiron one hundred and 10 yards long. The three attempts to move the ball 5 yards was changed in 1906 to 10 yards for three plays and the fourth-down was added six years later.

The popularity of the game grew quite a bit the last decade of the 19th century, however what was beginning to be obvious was the carnage that was the result of some of the early game

strategies, like mass charging of the players by locking arms and moving forward, also using their teammates unprotected heads as battering rams to clear the way for the ball carrier.

In 1904 it was reported that there were 18 football deaths and more than one hundred and sixty serious injuries, many of them as a result of the mass movements of people and the large bruising formations that they would use.

Interestingly enough Teddy Roosevelt in 1905, while also having had a bit of a personal interest in the sport at Harvard, (his nearsightedness had kept him off the varsity team), was very sympathetic to the idea of football being kind of a practice for battle, or a proving ground for battlefield strategies. He was quoted while speaking to an audience saying “I believe in rough games and in rough, manly sports. I do not feel any particular sympathy for the person who gets battered about a good deal as long as it's not fatal”..

Unfortunately football was becoming quite fatal, and when Theodore Roosevelt Junior begin to play for the Harvard freshman team, Roosevelt took a specific interest to see what he could do to try to reduce some of the violence and brutality of the game. Using his famous “big stick” technique, Roosevelt had invited to the White House representatives from Yale, Harvard, and Princeton, and he urged them to do something about the terrible violence, and also set a better example of fair play for the rest of the country. Yielding to that prodding, the schools did sign onto a statement in October 1905 pledging to do what they could to clean up the game and reduce some of the brutality.

However the carnage continued, and the 1905 season was especially brutal. 19 players died and more than 130 serious injuries were reported following that terrible season. A number of colleges switched back to rugby, some colleges dropped football completely and even the

Harvard president warned that Harvard could be next, a move that would be devastating to the game, as well as an embarrassment for the Harvard graduate in the White House.

Teddy Roosevelt swung into action again, and pushed the Harvard coach, and other leading football coaches, to consider serious rule changes that would reduce some of this devastation, hopefully without emasculating football or requiring the game to be played on too ladylike a basis (his words).

President Roosevelt's efforts begin to show results, the pressure did force the various colleges to participate in the intercollegiate conference, which eventually became the NCAA, and major changes were made in the rules in time for the 1906 season. Some of these changes were very significant in changing the strategies of the game, for example the creation of the forward pass. They also stopped the dangerous mass formations that were causing so many brutal injuries, and they created the neutral zone between offense and defense, and the 1st down distance was doubled to 10 yards.

The result of these rule changes were evident in the 1906 and 1907 years. Injuries did fall dramatically, and while they were still 11 reported deaths each year, that was certainly a welcome turnaround of the trend that had been underway before the rule changes.

In 1909 another round of changes driven again by an increasing number of fatalities modified the rules and strengthened the interest in the use of the forward pass which pretty much completed the evolution of the hybrid rugby and soccer game and brought it much closer to what we now know as American football.

Almost as a side note, in parallel with the evolution of football on the college campuses, football was already a very popular game with private rugby and soccer athletic clubs. These private

clubs were supposed to have only amateurs, not paid professionals, and they would play exhibition games. Owners got very creative when trying to motivate their players and still keep their amateur status. One popular practice was to offer some kind of trophy to the winners, and look the other way when they immediately sold them for cash after winning. Another technique used by some teams was to pay “expense money”, supposedly to cover their expenses to attend the game, and “double expenses” payments when you won were common. Since they were supposed to be amateurs, there were constant tensions between these athletic clubs and the Amateur Athletic Union with very creative ways constantly being developed to compensate players, and the Amateur Athletic Union would respond with an investigation and declare the tactics illegal. New tactics to pay were then developed and the cycle would repeat with the Amateur Athletic Union losing a bit of ground each cycle. Eventually the pretense was dropped and payments became more direct and the private clubs were transitioned out of amateur status, but it is interesting to note that the actual birth of professional football in America is thought to have been on the day that the Allegheny Athletic Association (AAA) defeated the Pittsburg Athletic Club (PAC) in 1892.

This game was played on November 12, 1892 and the game really turned into quite a debacle with several players showing up for the AAA’s that had pretty obviously been hired away from other teams to enable the AAA owners to try to field a powerhouse team. The abuse of the rules was so obvious that the owner of the PAC threatened to leave and not play at all. Since the followers of both teams had placed significant bets on the game, a compromise was worked out, the teams would play exhibition only and none of the bets that were being placed on the game by others would be valid. Even though the Allegheny Athletic Association won, their fans were furious since they were unable to collect on their bets, and the PAC fans were disgusted by the

use of the hired players AAA brought in from a Chicago team. Many years later, the use of paid players in that game was finally confirmed by finding an old document, now referred to as pro football's birth certificate, that actually documented the payments AAA made to William (Pudge) Heffelfinger . William became the first professional football player, he was paid \$500 and it was said that he demanded the doubling of the usual sort of “expense payment usually used, since he didn’t want to risk his amateur status for a mere \$250, so you might consider him one of the first professional players to hold out against a team owner until he got his raise.

Fast forward now more than a hundred years to our current times and note that football is the most popular sport in all America, and parallel systems of high school football, college football and professional football teams each occupy very popular segments and have very loyal fans.

High school football in particular is still very popular in most parts of the country. I played football in high school and thoroughly enjoyed it. I personally saw some of the positive life lessons that can be learned in high school football, the working together as a team, learning to accept failure as a lesson to be better prepared next time, and a number of other positive character building aspects that seem associated with teamwork. In many small communities, local football rivalries in high school are a community source of excitement and anticipation. By giving fans an opportunity to blow off steam as they root for the home team and boo the visitors, they can also experience vicariously the pain of defeat as well as the thrill of victory.

Numerous articles have been written in the last several years regarding the popularity of football especially at the local high school level, and it does seem to me that there is some strong shared belief that the teamwork and cooperation that's required, as well as the hard work and body

training involved in learning how to work together effectively as a team, may be an effective method of character building in preparing kids for a future on their own.

Football at the high school level does not seem to be driven solely by the idea that high school football is primarily a direct path to a career in football leading through college to the professional level. Vast majority of high school football players do not go on to professional careers or even perhaps very focused careers in college football, so there is a large cross-section of the country that has had exposure to the actual game of football at a local level and it seems that shared understanding may be part of the excitement of football as a spectator sport in later life. This year's 2014 Harris polls have confirmed that football continues to be extremely popular, professional football is reported as the favorite sport of 35% of all Americans.

The obvious popularity and broad support for high school and college football certainly seems to re-enforce the idea that football may represent teamwork as a sort of analogy to the American dream. We seem to like to watch people that may be knocked down or defeated, but they get back up and go back out and redouble their efforts to succeed.

Indeed, recent opinion polls of parents and community sentiments regarding high school football, shows there is still very strong support, in spite of some of the emerging concerns involving player safety and possible future complications from sports injuries.

The prevailing attitude seems to be to try to work with the coaches and schools further improve safety equipment and training, and there seems to be a positive local attitude to not discard football but to try to improve it at the local level.

It also seems to me that there may be some need in the psychological domain that organized sports like football may meet, perhaps a deep-seated need of our tribal desires to defend our

village (territory), and fight the other tribe from the remote villages, to at least secure an understanding of who has (current) superiority and strength.

The fact that the object of organize sports is not first and foremost to kill the remote tribe and steal their treasure, seems to me to be an improvement over primal tribal instincts and enables people to discharge their social frustrations in a somewhat less destructive manner.

I would have to conclude from my research that there's no obvious indication of any large ground swell to try to make the game of football go away in spite of some of the concerns that the sport may currently have.

Turning back to professional football, I note that it has been extremely effective at a exploiting the national broadcasting television medium of the 60s and 70s to achieve a much larger, and very loyal, national fan base than what was available in the past with actual ticket holders attending games at stadiums. The creative work and vision that linked broadcast professional teams and the medium of TV resulted in the creation of “Monday Night Football”, which successfully created a shared national game event each week that could not be missed, really leveraged the broad popularity of the NFL into the national powerhouse we see today.

Professional Football has maintained strong control over its performances on TV since that early era.

By also extending the pro football entertainment franchise into early video games was also a stroke of marketing genius. The Madden NFL video game, which debuted in 1988, is one of the most popular sports videogames ever designed, and became one of the premier video games of all times and the only pro football game officially licensed by the NFL players Association.

It seems clear that this video game strategy, which targeted much younger kids than the NFL had previously served, resulted in a fan base that understood the teams, and the players, and the rules of the game in a way that previous generations of fans did not. Those children of the first video game generation seem to be an important part of the current loyal fan base, and continue to make professional football the very popular national entertainment it is.

Just to give you some idea of the magnitude of this popularity of the NFL itself, the core negotiating and management efforts servicing the needs of the 32 NFL teams has a \$9 billion a year income of which one billion dollars is profit. The 32 NFL teams themselves account for an average of \$1 billion of sales per team or about \$32 billion in total sales for all the teams.

There are many good books out providing the history of the NFL itself, and its relationship to the entertainment industry and its role in managing the growth and coordinating all of the aspects of sales and production and distribution and merchandizing of pro football. It's quite an interesting story but suffice to say for the purpose of this paper that the NFL is the organization that has representation of all the professionals' football teams in America so the 32 NFL teams function in coordination with the central non-profit organization called the NFL as an integrated vertical monopoly. The NFL does have a great deal of influence and responsibility regarding player safety, salaries, and many other team issues but overall it is regulated only by itself.

As we move on from consideration of what is good about football, we now have to move into the bad.

As was clear from my review of the history of football, American football has always been understood to be a sport that has significant opportunity for injuries, and even from the founding days of football there always has been an uneasy balance between the excitement of the game and the kinds of injuries and disabilities that can result from playing it.

We will now take a look at what appears to be the most serious source of bad news for football and that is concussions and brain injury or what is commonly called in the medical profession Chronic Traumatic Encephalopathy (CTE) and this is a very disturbing field, and the research of the science of concussions and the way that the brain heals after injuries continue to reveal some increasingly serious concerns as far as football directly itself.

CTE involves the progressive degeneration of the brain tissue, including the buildup of a protein called tau. These changes can begin months, years, or even decades, after the last concussion and this brain degeneration is associated with memory loss, and confusion, impulse control, impaired judgment, paranoia, depression, and progressive dementia. CTE can only be diagnosed with certainty by a postmortem examination of the brain. There are number of manually administered mental acuity and orientation tasks that can be used to screen for the possibility of the condition but a definitive diagnosis is not yet possible prior to an examination of the brain after death. A significant number of athletes and people with suspected conditions have been working with researchers to donate their brains after their death for specific examination in regards to this particular condition, and to try to help correlate the postmortem observations with their observed symptoms prior to death.

Research continues to improve our understanding regarding the pathology of traumatic brain injury, and the characterization of the physics of the head and brain has also dramatically improved the neurophysiology understanding of what happens to a brain when it is subjected to extreme forces. This sort of brain trauma can occur in a variety of other situations, everything from automotive accidents to brain injuries in wartime and the brain science seems to be increasingly clearly teaching that concussions are not anything to be taken lightly.

When I was in high school, I witnessed firsthand some of my teammates experiencing excruciating difficulties after concussions, and in fact I know of one good friend that experienced significant personality changes and behavioral changes after multiple severe concussions. He had been a star athlete, but at that time the idea of getting back in the game quickly because the team needed you tended to create an urgency that may have trumped caution, and he was always angling to get back into either the same game after a head blow, or back to practice or a new game too soon, and eventually after three significant concussions he was finally no longer allowed to play, over the next few years you could easily see the cognitive deficits that he retained, even after the physical injuries were thought to have healed. The science now seems to indicate that one thing that was not understood as well back then is how long the injured brain actually takes to recover from the concussion, and it appears that even a small additional trauma to the brain during this long recovery can trigger a catastrophic multiplication of the damage beyond that which would have been expected from the separate instances of trauma.

So what is a concussion?

It helps to know a little bit about the way the brain is protected. The brain is actually cushioned in fluid, so there's a thin layer of fluid between the brain and the skull. There is not a lot of room

there, and the brain is actually a rather heavy organ, just under 3 pounds, and in the case of a very sudden stop of your moving skull, such as in a car accident or being hit on the head. The brain actually slams into the bony inner surface of the skull and experiences this trauma.

The brain can receive a significant trauma without any visible externally signs. In the earlier days of football, before the introduction of helmets to the game, skull fractures were quite common. After the introduction of helmets, and continuous improvements in these helmets, the instances of actual skull fractures have been dramatically reduced and that might give people some comfort that brain injury is also reduced by that method. However that does not seem to be the case. Any impact by which the head stops moving abruptly after being in motion, even with the protective headgear in place, still can slam the brain into the inner surface of the skull and cause significant trauma to the brain.

Chronic traumatic encephalopathy was originally referred to as “punch-drunk” and there were medical observations of this kind of syndrome that go back many years into the 1920s and was seen not only in football but initially was first seen with boxers. It was originally thought to be a disease of boxers since it was first seen most prominently in that profession. Overtime it was recognized to be a more general result of the trauma to the brain of athletes. CTE has received a great deal of research emphasis over the last several decades but much of the evidence appears to be somewhat disturbing in that it may be simply unavoidable that the human head is simply not built to be able to take that kind of shock. The progression from repetitive brain impacts to a full blown case of CTE may be almost inevitable. Once the brain has been injured, it can take a substantial amount of time before the brain actually recovers, and apparently any additional trauma during that protracted recovery period can cause more damage than would be expected in a normal brain. Some of the minimum recovery periods I have read are on the order of 15 days or

more so the idea of just shaking it off and going right back into the game, or returning to practice in less time than this seems foolhardy with what is now known.

Further on and probably even more disturbing is the research that seems to show that brains that are still in the process of growing and maturing, say during the teenage years, seem to show that an injury that occurs in the developing brain can actually profoundly affect the future development of that brain, so it's possible that something that might be a relatively mild concussion for an adult professional could potentially cause very significant changes in personality and disrupt significantly the further development of that brain.

There is wide debate about the validity of statistics regarding concussions, but the best that I could determine there's a general agreement that as many as 2,000,000 brain injuries are suffered by teenage players every year. It seems to be clearer over time that even smaller blows may have lasting consequences. The teenage brain experiencing trauma may actually also affect its future development thereby multiplying the disruption of what might even be viewed as a relatively mild brain injury. There's also research that brings significant concern that future behavior might be being modified after a brain injury in ways that we didn't previously recognize. Some research seems to indicate that trauma to the teenage brain may be associated with a future increase in violent behavior, difficulty with impulse control, and disruptions of the ability to plan and evaluate future events. There is some speculation that perhaps some of the increase in violent and erratic behavior of sports participants may be due to previous injuries - not simply their association with a violent game but actually due to physical brain injury.

Even at the professional level the NFL estimates that almost 3 out of 10 former players will develop debilitation involving their brain and that they will be stricken earlier and more often

than the general population. Recently the NFL settled a large settlement of \$765 million to settle thousands of concussion lawsuits that the players association had brought against The NFL.

Now moving on from the bad to the ugly.

There is a fascinating book out called “League of Denial” , authored by Mark and Steve Fainaru that documents the struggle by the NFL to try to come to grips with the improving science research on the causes and treatment for dramatic brain injury and their own health advisors that seemed to reject the emerging science. This book became a national bestseller and arguably helps serve as a focus point for critics to try to force the NFL out of what was viewed as a position of denial about the magnitude of the problem, and to being more proactive and providing more informed training to its sports medial teams. It could be argued that the dragging of their feet by the NFL to acknowledge quickly enough the seriousness of this issue may have deprived many players with brain injuries the access to research and treatments that could have helped them recover more function than they did.

Another awkward issue for the NFL is its tax exempt status.

Many people do not realize that the NFL operates as a tax exempt nonprofit and although the individual 32 teams do operate as profit-making entities, the NFL itself handles the negotiations and revenue management of the television rights and distribution and it's increasingly difficult to understand its status as a nonprofit.

While on the subject of taxes, I also note that much of the construction of the majority of NFL stadiums built have been funded with significant public dollars.

I will highlight just one example. The Minnesota Vikings wanted a new stadium and were suggesting they might move elsewhere if they didn't get one. Minnesota's legislature, in spite of having a budget deficit over \$1 billion dollars extracted \$506 million from taxpayers as a gift to the team covering roughly half the cost of the new facility, this all in spite of the fact that the Vikings as a privately held company was not required to disclose operating data despite the public subsidies it receives. Taxpayer's relationships like these with professional sports and the use of taxpayer dollars to essentially help subsidize a monopolistic organization that is already quite profitable is certainly something that is starting to receive additional scrutiny in Congress. There are a number of bills looking to either revoke their nonprofit status or change back the loophole in antitrust law that lets the NFL operate as a monopoly. The NFL was also successful in the past at lobbying to receive a special exemption in the tax code that protects professional sports associations as non-profits. It seems difficult to understand why specific nonprofit exemption was granted directly to such profitable businesses

In addition amid much criticism of the NFL for rigidly controlling the viewing of their video products on television, the FCC Federal Communications Commission recently struck down a long-standing sports blackout rules that prevent certain games from being shown on television if the audience for the live event is poor. That rule was lobbied into place in 1975 when there was concern that TV was reducing the attendance at stadium events, in spite of the consumer feedback at the time that the high stadium ticket prices and high food concessions costs were stressing the budgets of family's wanting to attend a stadium NFL event.

However in terms of giving the NFL an ugly reputation, it is hard to ignore the continued scandals we have seen this year. The discovery that some teams were actually paying their players a "bounty" to purposely injure another player or interfere with the play of the game,

unleashed quite a scandal in the NFL and also highlighted the concern that perhaps they just look the other way and don't aggressively police their own members. That scandal was followed by the incredible stories of domestic violence within the NFL that seems to be an epidemic. This has re-ignited an old debate about whether we may hold our sports players to a higher standard than we might even hold some of our fellow citizens as if they are specifically supposed to be of much higher moral character, but it is still disturbing that many of the research and analysis into the cases and frequency of domestic violence seemed to indicate that the problems of domestic violence, as well as other forms of violent behavior, seem to be increasingly prevalent in professional football. There have been other studies that attempt to highlight the possibility that this may actually be more of a statistical anomaly and actually professional football may have a lower statistical likelihood of instances of domestic violence and general violence amongst its members than the general population. However those studies when corrected for the rather important factor of income and access to healthcare and other personal indicators seems to show that the professional football player really should be more representative of the statistics valid for people with higher incomes, since in the general population the prevalence of domestic violence and violence against others is more strongly correlated with reduced income, lack of access to healthcare and poor living circumstances. The NFL has certainly been criticized for its poor response to this increasing number of domestic violence situations, and the unevenness of their enforcement, and punishments, for such behavior. The domestic violence scandal remains an ongoing concern, but it certainly is pretty ugly and the focus of quite a bit of ongoing debate.

To its credit the NFL seems to be trying to address many of these controversies by bringing in outside experts, looking at some managerial changes, and seems to be making significant changes in their screening, punishment, and intervention policies.

Interestingly enough, in spite of all of the controversy regarding domestic violence, issues about concussions and their best treatment and prevention, these scandals don't seem to be affecting the popularity of the games. Attendance is at an all-time high, the TV broadcast networks are paying record high dollars to buy the rights to broadcast the NFL games, so I guess we have to say that from professional football's business income viewpoint these issues are not yet hitting them in the pocketbook to the level where one would begin to worry about their viability.

As I look back over the research I've done to try to find my own opinion regarding "Is Football in Trouble?" I would have to say football has many troubles, but it's as popular as ever so it looks like these issues will probably be addressed in some way and the games will continue.

I think back to the start of football in America, and at one point the number of deaths that were occurring in the sport were threatening the very existence of the game as various teams were just refusing to play or switching to another sport, but rules were changes, the game was modified and football continued on into the powerhouse it is today. Football seems here to stay, but keep an eye out for the brain research, that is the only long term threat to the game I see.

My prediction is that American football will continue on just fine, thank you, but with increased safety training and improved risk mitigation and intervention.

Thank you very much.

Bibliography for “Is Football in Trouble”

Books:

League of Denial: The NFL, Concussions and the Battle for Truth

By Mark Fainaru-Wada and Steve Fainaru

Publisher: Crown Archetype; 1 edition (October 8, 2013)

The System: The Glory and Scandal of Big-Time College Football

By Jeff Benedict and Armen Keteyian

Publisher: Doubleday; 1st Edition edition (September 17, 2013)

The King of Sports: Football's Impact on America

By Gregg Easterbrook

Publisher: Thomas Dunne Books (September 24, 2013)

The War on Football: Saving America's Game

by Daniel J Flynn

Publisher: Regnery Publishing; 1ST edition (August 19, 2013)

NFL Football: A History of America's New National Pastime

by Richard C. Crepeau

Publisher: University of Illinois Press; 1st Edition edition (July 21, 2014)

Internet links to material read

http://www.washingtonpost.com/opinions/let-your-children-play-football/2014/08/22/7c764d68-2173-11e4-8593-da634b334390_story.html

<http://spectator.org/articles/35491/football-does-body-good>

<http://www.sportinglife360.com/index.php/why-high-school-football-is-so-popular-8448/>

<http://www.tampabay.com/sports/football/bucs/ten-reasons-the-nfl-has-become-so-popular/944676>

<http://www.businessinsider.com/football-popular-sports-2014-1>

http://espn.go.com/frontpage/?w_cid=ie9pin:frontpage

<http://www.sportsbusinessdaily.com/Daily/Issues/2012/01/26/Research-and-Ratings/Harris-Poll.aspx>

<http://www.npr.org/blogs/health/2014/01/31/269422628/poll-support-for-high-school-football-despite-concussion-risks>

<http://www.goodtherapy.org/blog/football-boys-bullying-connection-0130123/>

<http://www.hornetfootball.org/documents/football-history.htm>

<http://grantland.com/features/jonah-lehrer-concussions-adolescents-future-football/>

<http://www.pbs.org/wgbh/pages/frontline/football-high/attention-players-parents-coaches/>

<http://www.pbs.org/wgbh/pages/frontline/football-high/etc/introduction.html>

<http://nymag.com/daily/intelligencer/2014/10/what-liberals-get-wrong-about-football.html>

<http://www.forbes.com/sites/dandiamond/2014/10/08/what-jonathan-chait-gets-wrong-about-football/>

<http://aqpq.org/2014/09/21/the-nfl-forgetting-its-business-model/>

<http://bleacherreport.com/articles/1091102-roger-goodell-and-the-nfl-have-too-much-control-over-fans-viewing-experience>

<http://www.financedegreecenter.com/nfl/>

http://espn.go.com/frontpage/?w_cid=ie9pin:frontpage

<http://www.sportslegacy.org/research/cte/>

<http://www.bu.edu/cte/about/what-is-cte/>

<http://www.pbs.org/wgbh/pages/frontline/sports/concussion-watch/about-concussion-watch/>

http://www.slate.com/articles/sports/sports_nut/2014/09/nfl_players_life_spans_and_domestic_violence_rates_could_pro_football_actually.single.html

http://espn.go.com/frontpage/?w_cid=ie9pin:frontpage

<http://www.cbsnews.com/news/congress-has-the-nfl-in-its-crosshairs/>

http://www.theatlantic.com/magazine/archive/2013/10/how-the-nfl-fleeces-taxpayers/309448/?single_page=true

<http://www.motherjones.com/mojo/2013/10/three-ways-nfl-denied-footballs-concussion-crisis-cte>

<http://www.motherjones.com/mojo/2013/12/nfl-tax-exempt-status-rootstrikers-roger-goodell>

http://www.theatlantic.com/business/archive/2014/05/the-rotten-nfl-scheme-at-the-heart-of-the-att-directv-merger/371339/?single_page=true

<http://www.examiner.com/article/the-nfl-is-a-monopoly-whether-you-like-it-or-not>

<http://weakonomics.com/2013/04/26/the-nfl-is-the-purest-monopoly-in-the-world/>

http://www.amazon.com/NFL-Football-History-Americas-National-ebook/dp/B00JMOLQOY/ref=sr_1_1?s=digital-text&ie=UTF8&qid=1412826162&sr=1-1&keywords=history+of+the+nfl

<http://www.forbes.com/sites/monteburke/2012/10/09/why-is-football-so-popular/>

<http://www.nbcnews.com/storyline/nfl-controversy/nfl-turmoil-what-know-about-whos-trouble-why-n205906>