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Deeper than the game: Dissecting the Complexities of CTE, Race, and Socioeconomic
Motivations in the NFL.

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Introduction and background of CTE:

Throughout history this condition has been given various names. In the 1920s , it was known as “Punch drunk” syndrome of boxers, then a decade later, “Dementia Pugilistica” which means boxer’s dementia. These terms all describe what is now commonly known as chronic traumatic encephalopathy (CTE). This condition was able to transcend its origins in the boxing world, and become an umbrella term to describe the effects of repetitive head trauma. CTE occurs when repetitive traumatic brain injuries (TBIs) get worse and worse over time, impacting brain function. The main challenge lies in the fact that it may take decades for symptoms to appear serious enough to get medical assistance. These symptoms include changes in behavior, depression, loss of coordination, and trouble speaking, among others.

American football is the most profitable league in the world generating about 4.5 billion dollars annually, despite being played for only half of the year. The demographic nature of the National Football League (NFL) is roughly around 70% black, and this is a very important recognition to make. The sport itself consists of rough bodily contact, and the occasional direct head-to-head collisions, particularly increasing the risk of developing chronic traumatic encephalopathy (CTE). More notably, helmet-to-helmet collisions, the main contributors to concussions, are more prevalent within cornerbacks, wide receivers, and linebackers who have the highest concussion rates out of all positions. These positions are predominantly filled with black athletes. This raises the question: are black athletes in the NFL more at risk of developing concussions compared to their white counterparts, and what factors may contribute to this increased risk?

The central question of this study revolves around the impact that participation in football has on the long-term neurological health of black athletes, and what motivations drive their

continued participation. Black athletes in the NFL experience more concussions due to their overrepresentation in high-risk positions. Consequently, this leads to them being more at risk of developing chronic brain damage. This study aims to show that socioeconomic motivations and institutional biases have an influence on why black athletes are in high-risk positions. These factors all contribute to why black athletes in the NFL are more inclined to continue playing football despite the potential dangers, particularly the increased risk of developing CTE.

Racial background of the NFL and how it has played a role for these athletes:

Historically, the NFL can be seen as a relatively progressive organization in comparison to the racial standards that were in place at the time. They were one of the first leagues to formally integrate black players (Farrar). But they only did this due to the lack of popularity of the league. Although college football was increasingly popular in the states, professional football was considered an afterthought (Coates). But once professional football started increasing in popularity the black players in the league vanished. Secretly the NFL had banned all black players for 12 years, and although these athletes were allowed to play college football, they were no longer able to further their athletic careers.

Human agency in social cognitive theory is defined as what directs our choices, actions and regulates our experiences. It should be used to look how the NFL as a structure has evolved, and how racial structures in society have influenced organizational policies. Emirbayer and Mische emphasizes that “the key to grasping the dynamic possibilities of human agency is to view it as composed of variables and changing orientation within the flow of time.” This allows us to understand that what these black athletes went through shouldn’t be viewed through a historical context. Although the ban on black players initially limited the opportunities that these athletes had, it didn’t change their agency and was more of a motivating factor for these athletes

to define their roles in the sport. Bill Willis (1946) describes his experience "They found out that while they were calling us [racial slur] and alligator bait, I was running for touchdowns and Willis was knocking the sh*t out of them," Motley once said. "So, they stopped calling us names and started trying to catch up with us." The AFL merger ended up forcing the NFL to adapt to desegregation and drop its segregationist policies due to the progressive composition of the AFL (Baltimore Sun).

Structure dynamics and how race plays a role:

Athletes in the NFL are aware of the violent nature of the sport and know some of the risks involved with participating. Regardless of this knowledge it can be debated that a lot of these athletes were groomed into the sport. This conditioning begins from the high school level, even sometimes early, and continues through the collegiate level. Many of these athletes come from less fortunate backgrounds 86% coming from below the poverty line (Bongiovanni). These athletes are pushed to prioritize athletics over education as a result and making it pro is seen as their "only way out". One student athlete, Devin, saying "They tell you, you are a student first and an athlete next, but really you an athlete first and a student second. There is more emphasis on making your practices and meetings..." Statistics show this at play with Black athletes graduating at a rate of 76% compared to their white counterparts which graduate at a rate of 90% (NCAA research). Social reproduction theory describes how racial dynamics appear in social institutions, such as education, and how they work to reproduce social divisions. The educational institution, and sports institutions are intertwined and have direct influence on each other. For these athletes what this means is that their educational experience is significantly shaped by the athletic expectations and the academic limitations enforced by these coaches. These athletes are encouraged to go into majors that will "keep them eligible" instead of pursuing majors that will

allow them job opportunities in the future. This as a result can have a negative effect on their academic and future opportunities, as they will potentially lack the education to get jobs that will bring them a sustainable income.

These racial disparities continue through into the league as these athletes are pushed into more dangerous and athletically demanding roles. These roles in turn greatly increase the risk of developing CTE and other brain disorders. The NFL can be examined through the lens of Organizational Theory which describes the racial structure, behavior and dynamics of organizations, and how they function and adapt overtime. Positions in the NFL can be investigated to show the evolution of these dynamics. Marquez-Velarde, Guadalupe, et al looked into these positions categorizing them into three groups: Cumulative Hyper-Segregation which are positions that started off as originally white dominated but became black dominated over time. Durable Hyper-Segregation which are positions that originated and remain white-dominated and white-only. Integration which are positions that originated as white-only but are proportionally white and black. Cumulative Hyper-Segregation roles included DB, DL , LB , RB and WR which are the positions that are most vulnerable to concussions (Abdalazem). These positions being higher risk compared to Durable-Hyper-Segregation roles which are lower risk and heavily protected by the rules.

While the racial distribution of positions in the NFL may seem accidental and just by sheer chance there is no denying the continued enforcement of these stereotypes on these athletes. As described by Victor Ray “Once racial structures are in place, a racial ideology—or racism—arises to justify the unequal distribution of resources along racial lines. Racial ideologies then reinforce the underlying cognitive schema.” When it comes to the NFL this can be applied to the way stereotypes are pushed on athletes to be in certain positions. Even in the

recruitment process and scouting reports black athletes who try to go into white dominated positions are often discredited, undermined and deemed “not intelligent enough.” Black athletes are often described by reporters as “freak athletes”, and other dehumanizing terms while white athletes are referred to as studs and lighter terms. Although it isn’t intentional these phrases further push stereotypes dehumanizing these athletes. Black athletes who try to come out of the box are quickly shut down and encouraged to go to those high risk Hyper-Segregation positions.

There are also pre-draft assessments that are done in the NFL to enforce these stereotypes even further. Tests like the Wonderlic test are done to test players' intelligence although they are not reliable in predicting how successful a player will be. This test is seen by critics as culturally biased and inaccurate (Chung, [2005](#); Woods et al., [2018](#)). Using Lamar Jackson as an example had a notoriously low Wonderlic test score (13/50) which caused people to doubt his play making abilities. Many critics were alarmed with his low score but his ability spoke for itself, and further proved that the test is not indicative of playing ability or leadership. Lamar Jackson also had a pre-label pushed on him before even getting into the league. He was encouraged by NFL scouts to switch positions to WR and run routes during the combine which is unprecedented as he is a Heisman winning QB. The highest honor. No one can deny the blatant racism that he experienced, and even Jackson himself when asked about the racial bias towards black QBs responded, "It's still there. That's why I need that championship." This is an instance of the racial bias that never has left the NFL, as even in the 60s “Most Blacks who played quarterback in college, were moved to the position of receiver or utility back...” (Abercrombie). In week one 2020 ten quarterbacks with black ancestry started for their respective teams which was the most ever in NFL history. Although this shows significant progress, it is disappointing how these

athletes feel the need to continually prove themselves when they are already qualified, and highly skilled.

Racial stacking refers to the form of racial discrimination structured within the organization of sports teams, and franchises. The process results in the active selection and assigning of players to positions based on their ethnic background. It can be argued that the NFL does this as these Hyper-Segregational roles are overrepresented by black athletes. Black athletes are pushed out of positions that are considered highly desirable, and are pushed into positions that are not prestigious, high risk and lower pay. Central positions that require cognitive skill and leadership qualities are dominated by white athletes, while positions that require physicality and athleticism are dominated by black athletes. For example, inside linebackers are more of a central position. They are responsible for shifting formations among other things, while outside linebackers are a peripheral position known for speed and agility. Schneider and Eitzen's study showed that 60% of inside linebackers were white, while 71% of outside linebackers were black. These roles both require a high degree of athleticism, so it is interesting to observe the clear racial divide within the position.

These racially stacked positions are also more at risk of getting injuries and developing CTE. The data speaks for itself with over 400 injuries being reported in those positions compared to the 73 in quarterbacks, 57 in centers, and 27 in kickers. 99.4% of cornerbacks, 79.5 % of wide receivers and 57.4% of linebackers are black (Marquez-Velarde et al.). This data shows that athletes in these positions are more at risk of developing these neurological disorders compared to lower risk positions. Durable-Hyper Segregational positions have rules to protect their athletes such as roughing the kicker, and roughing the passer. These rules have been made stricter as the years have passed with strict penalties if broken. Protecting these Durable-Hyper Segregational

athletes even more and further reducing the risk of them developing any long term neurological damage.

Socioeconomic background and the motivational factors behind it: :

It is important to look at the motivational factors as to why these black athletes continue playing the sport despite the long-term risks. According to a study done based on one NFL roster “95% of non-white players reported coming from lower-middle to lower class income households”(Klemko). Another study conducted by Benjamin D. Rosenberg Ph.D. found that “The percentage of NFL players from counties with poverty rates higher than the national average has steadily increased with each decennial class... with over half (54.4%) more likely to be born in a county where the percentage of the population living below the poverty level was higher than the national average.” As stated previously 86% of football college athletes come from the poverty line. All of this data is pointing towards the correlation between poverty and athletic success. Although sources state that “70 percent of children from families with incomes above about \$105,000 — four times the poverty line — participated in sports in 2020. But participation was around 51 percent for families in a middle-income range, and just 31 percent for families at or below the poverty line.” You can interpret this as an explanation to why these athletes are pushed to do sports that are “non-privatized”. They are the easiest to practice while spending minimal money. All you need to practice football is a field, and as you continue through your academic career, schools can fund equipment costs. There is no official club football, so for these athletes coming from low-income households this sport is one of the only opportunities to “break the cycle”. One high school student named Corey Mitchell described sports as “it can get me out of certain situations. Like it can get me and my family out of Chicago to a bigger and better place.”

Black men must pursue these non-traditional routes in order to obtain higher education and change their social mobility. Statistics show that “In NCAA Division 1 schools, an African American man at a college or university is 13 times more likely to be on a football or basketball scholarship than a White man at a college or university.” Even at certain schools, for example the University of Utah half of the black men on campus are on football or basketball scholarships (Jackson). This shows the amount of influence sports has on the black community, as black people only represent 14.2% of the U.S population. There are films and books such as *Hoop Dreams* and Darcey Frey’s book *The Last Shot: City Street, Basketball Dreams* that document the emphasis that young African American men place on sports as a way up. They latch on to the dream of athletic success partly because it is perceived as one of the few opportunities for middle-class success. “They spend many hours per day developing their speed, strength, jumping height, or “moves” to the virtual exclusion of those abilities that have a greater likelihood of paying off in upward mobility such as reading comprehension, mathematical reasoning, communication skills, and computer literacy” (Eitzen). This can be seen as an explanation to why black athletes are less likely to be in roles that require intellectual abilities. As they continually put those abilities in the background to be able to focus on athletic skill, forcing them to gravitate towards positions that require more athletic ability. Consequently, this creates a continuous cycle of these athletes being drawn to high-risk positions due to the athletic demand required of them.

Children coming from lower income households very often are behind compared to their peers from more affluent families. Black families have the highest rate of single parents with 45.6% of African American youth living only with their mother. Compared to only 16.7% of White Americans, and 24.5% of Hispanic Americans living in similar conditions (OJJDP). These

single parent households are more likely to be in poverty and reside in lower income neighborhoods due to the fact there is only one income stream. Multiple studies have shown that schools that have the largest proportion of children with low school readiness were from neighborhoods with high social risk Janus et al (11). Another study conducted by Willms (12) established that children from lower socioeconomic status (SES) households scored lower on a receptive vocabulary test than higher SES children. The effects of this can be seen as these individuals progress through their educational journey. People in the lower middle class tend to score lower on the SAT, and black individuals in general scoring the lowest on Average compared to other races (Cheng). This further hinders them from getting accepted into 4-year colleges. ("Study: Wealth Gap," 2004). Shapiro (2004) also suggests that many parents use wealth to facilitate entry into high quality neighborhoods, schools, and to help children get a start in life by paying for college and helping their children become homeowners. This wealth provides their children with an opportunity of better educational experiences, financial security, and relieves them of the pressure of only having athletics to fall back on. They get to view sports as just an extracurricular rather than a means of achieving a better life.

CTE the harsh reality of retirement:

Research in an autopsy study conducted by Boston University CTE center has shown that 345 out of 376 former NFL players studied had CTE. This doesn't imply that 91% of all people in the NFL are going to have chronic traumatic encephalopathy due to how equipment has changed vastly in comparison to generations before. But this is already an alarming and saddening statistic. Despite the high population of black athletes in the NFL Race-norm testing was still common practice until 2021. Race-norming tests assumed that black-people generally have lower cognitive baseline scores, so being able to show a link between mental decline as a

result of football play was harder. This made it extremely more difficult, if not impossible, for these men to be able to receive compensation for their injuries. This resulted in black players being denied payments in the NFL's 1 billion concussion settlement.

The denial of compensation sheds light on the harsh reality that these athletes have to face, having put their bodies on the line throughout their NFL careers to then being discarded without financial support. It could be fairly argued that they are paid generously in the NFL in comparison to other careers. Many viewers are used to seeing flashy contracts and their favorite players playing for around a decade, or even more sometimes. Many people fail to realize that the NFL is a 53-man roster with the median salary of 860,000, and average career length of only 3.3 years. Although that is still a generous amount of money a lot of these athletes have poor financial literacy which results in them losing all, if not most of it. According to a working paper from the National Bureau of Economic Research, 15.7% of NFL players have filed for bankruptcy within twelve years of retiring. (16% of retired NFL players go bankrupt, Fortune.com (Hart). Sports Illustrated also reports that 78% of NFL players face serious financial hardships after retirement. These are just a few of the post retirement challenges that paint a picture of the struggles that these players endure despite their contributions to the sport.

Thorough research supports the claim that black athletes in the NFL are more at risk of developing neurological disorders compared to their white counterparts. The evidence showing that there is an overrepresentation of black athletes in high risk positions compared to those of low risks alone raises alarms. Sometimes these athletes are even pushed out of low-risk positions because of stereotypes that have been around since the beginning of the league. There is also evidence pointing to Socio-Economic motivations to why these athletes participate in the sport. The NFL gives these men an opportunity to make money doing what they love and change their

social mobility in the process. Despite the risks many of these players are willing to take the gamble if it means that they can provide for their families, and secure generational wealth.

There are steps that the league can take to ensure safety for these men. The first being the normalization of CTE and no longer treating it like a taboo subject. A lot of athletes are not properly informed on the dangers of the sport, and the future health implications that it has due to that fact. The NFL has finally acknowledged that there is a direct link between CTE and football and has made efforts to increase player safety within the league. Despite this, there is barely any awareness or discussion of the topic to the public from the league. Lack of dialogue is a lack of honesty and makes these athletes unaware of the possible future they have laying ahead of them.

Strides must also be taken within the community to change the mindset of these young men. In 2022, there were 4.15 million black families in the United States with a single mother (Statista). Unfortunately, due to this fact a lot of black men don't have proper male role models in their lives. As a result, some of these younger men look up to these coaches and as adult male figures. So, it is the responsibility of these coaches to encourage, and also enforce, that sports isn't the only outlet in their younger and more impressionable years. Only 2.6% of highschool football players make it to division one. Out of all the football players that make it division one only 1.6% of those athletes make it to the NFL. These statistics need to be echoed by these coaches to let these athletes know about the harsh reality of chasing the dream.

In conclusion, more case studies need to be conducted on this topic specifically about young black men and their motivations for pursuing professional sports, as that was a slight limitation in my study. A study including black men from more affluent neighborhoods would give an interesting but also extremely important perspective.

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