

Reproducing Sports Stars: How Students Become Elite Athletes

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Background/Context: *School-sponsored sports programs are seen in both the public and policy spheres as meritocratic mobility institutions. In the U.S. context, athletic participation can yield access to college via sports performance. Meritocratic mobility would be achieved as individuals use their athletic ability and effort to enter universities and in turn improve their social standing. Yet few existing studies empirically examine the extent to which interscholastic athletic participation yields mobility. As a result, little is known about how individuals access colleges via athletics.*

Purpose/Objective: *This study's purpose was to understand how individuals began a path to college via sports. In doing so, it asks: what larger social forces influence how youth become top-level college athletes? It draws upon social reproduction theory—how publicly funded educational entities ensure the maintenance rather than the reduction of class inequality—to determine whether youth sports participation facilitates mobility.*

Research Design: *This qualitative study examined the athletic and academic trajectories of 47 National Collegiate Athletic Association (NCAA) Division I student-athletes from one university classified as Research-1, Tier-1, and as a member of a power-five athletic conference. Data include semistructured life history interviews, an original database, and institutional reports.*

Population: *Participants were recruited from four teams to investigate the athletic selection process: men's and women's track & field and rowing. The teams offered multiple comparisons in macro- and micro-social processes. Rowing draws from White and elite communities, because it requires tremendous resources to participate. Conversely, track & field requires fewer resources and draws more participants from marginalized communities.*

Findings: *Research reveals a sports-track-to-college pipeline and a correspondence between White middle-class communities and greater access to elite universities via athletics. Access to the sports-track-to-college pipeline is co-constructed through interactions at the individual, familial, and institutional levels. Five reproductive mechanisms are discussed—community access, bureaucracies, social access, knowledge, and enacted knowledge—all of which emerged as greater determiners for college athletic recruiting than individual athletic merit.*

Conclusions: *Recommendations offer policy and programmatic changes at the high school, college, and NCAA levels that make athletic recruiting more transparent and systematic to lessen the reproductive effects.*

Social reproduction explores how publicly funded educational entities ensure the maintenance rather than the reduction of class inequality (Anyon, 1983; Apple, 2004; Bowles & Gintis, 1976; Lareau, 2003). Intercollegiate athletics is commonly presented as an arena that offers mobility opportunities for low-income youth (Coakley, 2007; Eitzen, 2012). Many colleges allow students with academic records below the university's stated admissions policy standards to receive exceptional admission and/or scholarships to top universities based upon athletic talent (Brand, 2006; Eitzen, 2012; Schulman & Bowen, 2001). The premise is that students born into areas with lower performing schools and with lower educational outcomes can use their athletic ability to enter top universities.

Previous attempts to examine the mobility potential through athletic participation did so by outlining the slim odds for youth to become college and later professional athletes (Edwards, 1979; Eitzen, 2012; New, 2015; Riess, 1990). Studies of higher education attainment often center student background characteristics like region, class status, parental education level, and high school ranking (Davies & Guppy, 1997; Horn & Nunez, 2000; Ishitani, 2003; J. Jackson & Kurlaender, 2014; Teranishi & Parker, 2010; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). These approaches show a narrow college pathway for low-income students. Without a robust understanding of what processes limit mobility, this method can frame marginalized groups as deficient or lacking abilities (Winkle-Wagner & McCoy, 2016). These approaches also minimize how elite groups participate in and protect their status in society (Giroux, 1981; Kaufman, 2005).

This qualitative study examines one route co-constructed by White middle-class communities to access higher education and maintain their social standing. It does so by considering the shared background characteristics of Division I NCAA athletes and asks: *what larger social forces influence how youth become top-level college athletes?* This study used social reproduction theory to review 47 life history interviews with Division I athletes, an original database, and institutional reports. Collectively, the data reveal a *sports-track-to-college* pipeline that White middle- and upper-class youth shape and use for college access. The findings contradict the national belief that elite athletics provide a reasonable pathway out of poverty (Eitzen, 2012; Gems & Pfister, 2009; Mackin & Walther, 2011).

THEORETICAL FRAMEWORKS: WAVES OF SOCIAL REPRODUCTION

Reproduction theories explain how power structures, such as the class system, maintain themselves intergenerationally (Leonardo, 2009; MacLeod, 1995). Researchers implicate schools as state-sponsored institutions that facilitate rather than minimize class differences. Bowles and Gintis' (1976) landmark study of the American school system offered a "correspondence theory" between schools and the class system. As Marxist-inspired economists, Bowles and Gintis used historical quantitative datasets to demonstrate that the public-school system was not a vehicle of upward mobility; instead, it offered lateral movement. Others expanded Bowles and Gintis' study into "social reproduction theory" (Anyon, 1983; Apple, 2004; Bourdieu & Passeron 1977), which states that schools create the differentially skilled labor force needed for a capitalist system by inherently promoting the behaviors and knowledge of the middle- and upper-classes, furthering their social advantage.

Yet Bowles and Gintis' (1976) study was not without faults. Some critiqued Bowles and Gintis for offering an over-deterministic "Orwellian" (Giroux, 1981, p. 93) relationship between schools and the economy (Apple, 2004; McLaren, 2007). In particular, Bowles and Gintis minimized classroom mechanisms that increase, and in some cases, mitigate economic inequality (Apple, 2004; Giroux, 1981; McLaren, 2007; Oakes, 2005). Others believed correspondence theory portrayed students as agentless and unaware of their fate (Giroux, 1981; Lather, 1991; Rikowski, 1997; Willis, 1977). In addition, critical race scholars (Allen, 2004; Leonardo, 2009; Noguera, 2003) and feminists (Arnot, 1994; Clarricoates, 1981; Grumet, 1988; Lather, 1991) argued that the Marxist nature of this theory ignores how schools also reproduce race and gender.

The critiques of Bowles and Gintis did not limit the power of their theory. Instead, critical theorists expanded social reproduction to account for how cultural processes and individual actions shape reproduction (Apple, 2004; Ferguson & McNally, 2015; Lather, 1991; Leonardo, 2009, 2010; McLaren, 2007). The second wave of approaches used Antonio Gramsci's (1971) theory of hegemony. Rather than assuming schools mirror the economy, Gramsci saw capitalism maintained through complex and contradictory cultural processes. He theorized how capitalist values were co-constructed and agreed upon through interactions between elites and various allied groups. Schools are one such site of cultural production—producing society's shared knowledge base—that legitimate unequal social relations. Scholars use hegemony to examine the contradictory nature of power relationships (Willis, 1977), explore how other structures such as race and gender shape capitalism (Lather, 1991; Leonardo, 2009), and

locate power relations in multiple social sites beyond labor such as the media, schools, and sports (Althusser, 1971). This second wave of reproduction theory uncovered how schools are inherently ideological institutions with hierarchies, knowledge systems, and organizational mechanisms that produce and maintain unequal social relations.

This study uses two Gramscian views of social reproduction to uncover how school sports offer an alternative pipeline for already advantaged groups. The first is how to examine where reproduction occurs such as curricula, bureaucratic rules and regulations, and hierarchical social relationships. The second is how knowledge is transmitted, disseminated, and co-constructed within schools to reinforce the class system.

LITERATURE REVIEW

The Gramscian education scholars uncovered how schools advantaged elite groups through a variety of institutional mechanisms including hierarchical relationships, policies, knowledge systems, curricula, parental involvement, and organizational design (Apple, 2004; Banks, 1995; Bowles & Gintis, 1976; Giroux, 1981; McLaren, 2007; Oakes, 2005, 2008). They uncovered how schools, as highly bureaucratic state-supported entities, maintained unequal economic outcomes by offering distinct forms of knowledge to different groups. Unequal knowledge sets are provided in at least two ways. The first is through offering different “tracks” or routes through education (Oakes, 2005, 2008). The second is through what P. Jackson (1968) and later Snyder (1973) called a “hidden curriculum,” or how students who intuit implicit educational tasks are quickly elevated within schools. Those who struggle are labeled as deficient or unintelligent, falling behind on assignments, tasks, and placed into “easier” classes. This literature reveals that family income (Lareau, 2003; Oakes, 2005, 2008) and race (Ladson-Billings, 2006; Leonardo, 2009; Noguera, 2003; Teranishi & Parker, 2010) are greater determiners to access higher education than merit.

College sports is also an important social site to reinforce the upward mobility narrative for the American public. Through an alternative admissions and selection process, colleges offer a unique opportunity to aspiring athletes who can improve their social standing through education, through sports, or through the best of both: college sports. As soon as intercollegiate contests began in Ivy League universities in the mid-19th century, questions arose regarding whether athletes should emerge from the student body or should be brought to the campus with the specific purpose of performing a sport (R. Smith, 1988; Thelin, 2011). Today, the NCAA permits universities to support alternative admissions processes for

athletes based on athletic merit (National Collegiate Athletic Association [NCAA], 2016). Researchers quantify athletic merit by offering physiological explanations for athletes' exceptional physical talent (Baxter-Jones, 1995; Burgess & Naughton, 2010; Durand-Bush & Salmela, 2002; Gould, Dieffenbach, & Moffett, 2002; Ostojic, Mazic, & Dikic, 2006). Others examine athletes' effort levels in sport (Côté, Fraser-Thomas, & Jones, 2005; Duda & White, 1992; Gilbert, Gilbert, & Trudel, 2001). In each version of mobility, sports success is attributed to individual-level variables.

Critical sports scholars have also applied earlier versions of social reproduction to examine the role of athletics in legitimating unequal social relationships. Some investigate how male athletes reproduce class and race (Singer & May, 2010), how the spectacle of sports trains the public in social norms (Foley, 1990; Gems, 2000; Guttman, 2006), or how the odds for youth to become college and later professional athletes are slim (Edwards, 1979; Eitzen, 2012; New, 2015; Riess, 1990). The spectacle and corresponding media coverage of sports transmit the upward mobility narrative, or notion that there is upward economic movement (Carrington, 2013; Coakley, 2007; Eitzen, 2012). The upward mobility narrative is particularly damaging to low-income communities of color because sports become *the* viable career option (Carrington, 2013; Coakley, 2007; Eitzen, 2012). This literature demonstrates that universities supporting big-time sports programs exploit disenfranchised populations. However, much less is known about how most student-athletes—those who are not part of the revenue sports—access elite sports and how they participate in maintaining unequal social systems.

Finally, previous research lacks attention to *how* sports promote the knowledge, skills, and social backgrounds of the White middle-class. The closest scholarly work in this area examines how university admissions practices, particularly at private schools, elevate athletic ability in the decision-making process (Schulman & Bowen, 2001; Stevens; 2009). As a result, this paper fills the research void by uncovering another school pipeline that reproduces class inequality. In addressing the previous gaps in the literature, this research asks: *what larger social forces influence how youth become top-level college athletes?*

METHODS

Data for this qualitative study come from an institutional ethnography (D. E. Smith, 2005) at one academically and athletically elite university, Coastal U. Institutional ethnography sees everyday life experiences within institutions, like education, as a critical form of inquiry to interrogate power structures (D. E. Smith, 2005). It relies on a preponderance of evidence

(Anderson & Scott, 2012) to link individual experiences to structural inequality. A constructivist epistemology, one that examines how people make meaning of their former, current, or possible lived experiences, guided the methodology and analysis (Creswell, 2013; Yanow, 2013). Two datasets from the larger study are used to construct the sports-track-to-college pipeline.

Coastal U is a highly selective Research-I and Tier 1 public university with over 40,000 students. It is part of the NCAA's Division I, Power Five, Bowl Championship Series athletic conference, placing it among the most reputable and competitive college sports programs. Its status as an elite academic and athletic institution makes it a desirable choice for those on an athletic route to higher education. Coastal U's student body consists of 25% lower income students and is majority people of color. Yet the student-athletes at Coastal U do not mirror the student body demographics. 42.5% of Coastal U's student population identifies as Asian, but Asians are only 6% of the campus's athlete population. Similarly, 10.6% of Coastal U's student body identifies as Latino, but Latinos are less than 1% of the athlete population. In contrast, 28% of the student body of Coastal U identifies as White, whereas 47% of the athlete population is White. Students identifying as Black are also overrepresented in the Coastal U athlete population, though not in the sports for this study. At Coastal U, only 3.4% of the student body identifies as Black, whereas 23.3% of the athlete population identifies as Black.

The demographic differences at the institutional level suggested there may be varied selection processes for athletes. Four teams were used to investigate the athletic selection process: men's and women's track & field and rowing. The teams offered multiple comparisons in macro- and micro-social processes. Rowing draws from White and elite communities, because it requires tremendous resources to participate (Bourdieu, 1978; Eitzen, 2012). Conversely, track & field requires fewer resources and draws more participants from marginalized communities (Bourdieu, 1978; Eitzen, 2012; Wessells, 2011).

Two main data sources built the sports-track-to-college pipeline. The first was a database of Coastal U track & field and crew rosters from 2005–2015. The database was created to identify broad-based trends in athletes' background characteristics. The database included 1,487 athletes, with a near even representation across sport and gender. Rosters offered each student-athlete's hometown, high school, sport, and gender. High school and hometown were paired with data from the U.S. Census Bureau and Department of Education to create measures for income and high school rank. The database provided comparisons across social characteristics influencing educational attainment such as family income, neighborhood

wealth, and school quality (Baker & Corcoran, 2012; Lareau, 2003; Nasir, 2011; Noguera, 2003; Orfield & Frankenberg, 2013). Institutional reports from Coastal U were then used to compare how race, family income, and high school rank differ among three groups: (1) rowers and track & field athletes at Coastal U, (2) Coastal U students, and (3) students at Coastal U regional universities.

The database was used to generate descriptive statistics and point to trends in *who* accesses college via athletics. Findings from the descriptive statistics were then contextualized by semistructured life history interviews (Connell, 2005; J. M. Smith, 2012) to examine *how* school-sponsored sports favor certain social groups. Interviews offer a window into how humans live within, construct, reinforce, and/or resist forces that constrain social outcomes (Hargreaves, 1994; Oakley, 1981; Rudolph, 2005; Soss, 2013). Semistructured interviews rely on an interview questionnaire *and* allow the researcher and the interviewee to engage in topical digressions that are not captured in formalized, structured interviews (Creswell, 2013). Life histories help uncover the processes that influenced one's access to institutions, how one makes sense of their current experiences, and how both shape one's view of the future (Connell, 2005). The student-athlete life history interviews explored their pre-college athletic and academic journeys, including (1) how individuals accessed sports, (2) why they selected sports over other activities, (3) what athletic/academic support systems they received, and (4) how sports enhanced or limited their educational engagement. Participants were recruited through purposive sampling methods that included attending team meetings to present the research opportunity. Volunteers from the initial meetings were then asked to participate in a "snowball" recruitment method and refer their teammates to be possible participants (Biernacki & Waldorf, 1981). The latter approach proved to be a more successful recruitment method and led to the total participant count of 47 student-athletes.

Life history interviews were gathered during the 2015–2016 academic year from the 47 student-athletes of various race, class, and gender positions (see Appendix A for more information on the study participant background characteristics). Participants self-identified their race and gender positions. 28 participants identified as women and 19 as men. 11 classified themselves as "people of color," identifying as Black or mixed-race, and 36 identified as "White." Only 3 people in the study (all female) identified as "low-income." Low-income athletes relied on forms of scholarship or aid for access to sports. One participant strongly identified as upper-class; the remainder were middle or upper-middle-class. To maintain participant confidentiality, pseudonyms are used.

After data collection, the interviews were coded through both open and fixed coding methods (Creswell, 2013). Research began with open coding in which the researcher read each interview identifying any possible theme, repetition, or pattern. Initially, the researcher used descriptive language and stayed as close to the text and participant's account as possible (Ravitch & Carl, 2016). Open coding revealed new themes not identified in the literature or previously considered by the researcher, such as how natural environmental features like weather, landscape, and placement of prestigious events impacted athletic access (see Table B1 in Appendix B for a sample of open codes).

After open coding the interviews, deductive coding commenced to identify themes related to paper's theoretical framework (Creswell, 2013; Ravitch & Carl, 2016; Ryan & Bernard, 2003). Fixed codes came from social reproduction identifying institutional features such as curricula, hierarchical relationships, bureaucratic layers, and policies in both sports and school (Anyon, 1983; Apple, 2004; McLaren, 2007). These phases generated a lengthy initial list of codes. Axial coding, a sample of which is presented in Appendix B, was then used to group the codes into categories (Strauss & Corbin, 2015). During this phase, the researcher became the "primary instrument" of analysis (Ravitch & Carl, 2016, p. 261) and interpreted the descriptive codes to identify higher order themes. The entire process relied on iterative analysis, in that insights deepened through a re-reading and refinement of coding (Ravitch & Carl, 2016).

FINDINGS: UNCOVERING THE SPORTS-TRACK-TO-COLLEGE PIPELINE

Data from this qualitative study revealed five interrelated and mutually informing mechanisms within the sports-track-to-college pipeline that ensure a connection between a sports route to college and majority White, majority middle-class areas. (1) *Community access* includes the median family income, the geographic landscape, and the institutional availability of the community; (2) *Bureaucracies* includes the rules that govern or organize an institution; (3) *Social access* includes relationships such as those with caregivers, coaches, and teammates that are forged in these community settings; (4) *Knowledge* refers to the shared understandings that are produced and circulated within the pipeline; (5) *Enacted knowledge* refers to how participants utilized knowledge produced within the pipeline.

COMMUNITY ACCESS

The interviews and descriptive statistics illustrated three features of communities linked to reproduction: economic resources, geography, and institutional access. In other words, access to such communities made aspiring athletes better positioned for the sports-track-to-college pipeline.

Median Family Income

The economic resources attached to a community were determined through the roster database. Measures were created for family income from the U.S. Census Bureau's median family income dataset and for secondary-education quality from the respective state's educational bureau's high school ranking systems. Coastal U defines schools scoring 8 or above on a 10-point ranking system as "high" quality. Measures for family income and secondary-education quality yielded differences between Coastal U track & field and rowing athletes and the student body. Only 0.43% of student-athletes met state definitions of low-income compared to 25.8% of Coastal U students (see Appendix C for a table showing the median income comparison across student populations). Further, athletes were concentrated in the middle or upper-middle income range, with 71.21% from communities whose income is higher than their state's family median income (see Appendix C for details). Athletes had a median family income of \$91,028, a mean of \$102,098, and a standard deviation of \$39,374. Athletes also had a larger population of families with incomes above \$150,000. Further, the mean family income for athletes is much higher than the median, which suggests a subset of athletes come from the wealthiest regions in the dataset. The wealthier communities also reflected better access to schools. Compared with the general undergraduate population, a smaller proportion of athletes attended low-ranking high schools (see Appendix D for more information on the academic background comparison across Coastal U student populations).

While Coastal U athletes generally came from wealthier communities, differences across sports remained. Rowers came from neighborhoods that were majority White with greater median incomes than those of track & field athletes. Track & field athletes still came from well-off communities, but the median incomes were lower than those of the rowers. Track & field athletes' community median income ranged from \$80,000 to \$124,999 per year. Less than 3% of track & field athletes came from low-income areas where family incomes averaged less than \$50,000 per year.

Geographic Landscape

In addition to community wealth, distinct geographic regions facilitated greater access. For aspiring athletes, geography defined what sports were accessible in schools and communities. For instance, rowing necessitates the availability of certain geographic features—namely, access to a large, calm body of water. This geographic imperative restricts the sport's presence by region.

Morgan, a White woman who grew up in New York State, joined a rowing team because water flowed through and connected her town:

Our town was built because of the Erie Canal. We [used to be] a port. Now [the canal] is a decorative little thing that moves through the state. But that's what we row. It goes through the whole town, so everybody knows about it. It's like a very, family-oriented homey-suburban town and everybody knows everybody. And rowing is in the middle of it all. (Morgan, interview, February 25, 2016)

With a median family income of \$120,860 per year, the water flowing through Morgan's town could remain clean, accessible, and "decorative" and support a burgeoning rowing community. The fact that water can be used for recreation, rather than its original economic purpose as a shipping channel, reflects one measure of the town's economic prosperity.

Morgan's reflection offers another feature of geographic access, or how certain regions of the country had a historic and cultural connection to certain sports. Morgan grew up in New England, a U.S. area with a long history tied to rowing. Rowing, the first American collegiate sport, came to Yale and Harvard Universities in the mid-19th century from England, as these Ivy League institutions imitated the University of Oxford (R. Smith, 1988). This historical legacy persists today as junior rowing clubs are concentrated on the East Coast. Only seven U.S. states offer rowing in their high schools, with a total of only 6,679 American high school rowers (National Federation of State High School Associations [NFHS], 2015). Additionally, 30 states have eight or fewer high school rowing programs, including water-rich areas such as Wisconsin, Minnesota, Louisiana, Kentucky, and Hawaii. Five states have no rowing programs whatsoever: Mississippi, Montana, New Mexico, North Dakota, and South Dakota. States without rowing (in the central and southern U.S.) are some of the poorest regions of the U.S., whereas states with rowing (New England) are some of the richest, reflecting the economic resources necessary to sponsor the sport (Riess, 1990; Wessells, 2011).

At first glance, track & field is more geographically available than rowing. Track & field is the second most featured American sport offered by high schools in all 51 U.S. states and districts. There are just over 16,000 high schools in the U.S. that sponsor track & field programs, with 578,632 men and 478,726 women participating in the sport (NFHS, 2015). That is roughly 160 times the number of U.S. high school rowers. USA Track & Field, the governing body for the sport, has over 2,000 private club memberships for those willing to pay extra to participate in the sport. Weather even seems to do little to restrict this outdoor activity. Instead, high schools encourage students to endure the frigid or sweltering temperatures. Three study participants came from areas with frequent snowfall and/or close-to-zero temperatures. Another 12 came from areas where temperatures rise about one hundred degrees in the summer. This meant practices occurred as early as 6:00 a.m. to save the athletes from heatstroke.

The cultural landscape also restricted access to track & field. Whereas rowing clubs are concentrated on the East Coast, reputable track & field programs, coaches, and meets are concentrated in Southern California. Being from this region conferred athletic success on athletes more so than those from other regions. Of the study's track & field participants, 5 of 22 participants were state-level performers in their event. Ten of the participants came from the Southern California region, yet only one was a state champion. The remaining four came from a different part of the country or world.

The clustering of athletic programs and talent in Southern California advantaged athletes in another way. The biggest race mentioned by virtually every track & field athlete, regardless of event, was the Mt. San Antonio College (SAC) Relays. The meet occurs in April about 25 miles east of Los Angeles and hosts high school, college, and Olympic level races. For those from the southwestern U.S., attending this meet is a regular part of their season, giving the potential collegiate athletes years to be seen by college recruiters. Those from other regions had to fund their own way for a chance to compete at the prestigious meet and network with college recruiters. Brandon, for instance, attended the Mt. SAC relays yearly. Brandon's costs included a round-trip flight from the Midwest, multiple nights in hotels, and meals on the road. A conservative estimate puts these travel costs close to \$1,000 per person for attending one meet.

Institutional Availability of the Community

Along with economic and geographic restrictions, community access was shaped by institutions—namely, the sport organizations present. The types of sport opportunities utilized by the participants were (1) recreational:

low-cost community-sponsored organizations, (2) clubs: higher cost private organizations, (3) private coaching: one-on-one paid coaching, and (4) school sports: sports sponsored by K–12 schools.

Early access to athletics came through their community’s sponsored recreational leagues. For U.S.-born students, the leagues were religious affiliations, such as Catholic Youth Organization (CYO) basketball, recreational centers with low-cost membership fees for residents, or nonreligious affiliated youth organizations such as American Youth Soccer Organization (AYSO) soccer. Brandon saw recreational sports as the nucleus of his Midwestern suburban community which offered several sports that varied by season: soccer in the fall, basketball and hockey in the winter, and volleyball in the summer. These low-cost youth sports were subsidized by the community’s collective time and income. “There’s a lot of money obviously. Lots of free time...Every Saturday morning if you had a kid aged four to ten then you’re doing [sports] on a Saturday morning” (Brandon, interview, October 6, 2015). Sports were so commonplace in Brandon’s community that being an athlete “is just what your kid does” (Brandon, interview, October 6, 2015).

Even with broad-based access to sports in wealthier communities, participants were quick to downplay the “seriousness” of these teams. To become a “real” or “competitive” athlete, participants moved away from recreational sports and joined private clubs. 77% of participants joined private club sports throughout their athletic careers. These competitive teams had longer seasons and required greater financial and time contributions from families, including paying for travel costs, uniforms, club, and equipment.

The cost of private club affiliation varied by region or sport. The average membership for the top 10 U.S. junior rowing programs was \$2,674 per year (in 2016 dollars). The most affordable club, located in upstate New York, costs \$1,300 per year. The most expensive came from a neighboring state, Connecticut, costing \$3,900 per year (see Appendix E for a table showing the top U.S. rowing club membership costs). Clubs also had rigorous handbooks detailing the appropriate clothing, behavior, and appearance for the sport and required family donations, either financially or through volunteer hours working regattas.

The club membership fees for track & field were lower than for rowing, but costs still accumulated. On the surface, track & field seems like a sport that requires only a pair of shoes to participate. In reality, the sport itself is complex. Track & field has at least seven specialties: sprints, jumps (long, triple, pole vault, and high jumps), throws (hammer, javelin, shot put, discus, and weight throw) mid-distance, long-distance, relays, and hurdles, all of which require different training and expertise. The

variations in track led athletes to seek private coaching to increase their abilities. Private coaching for all kinds of youth sports has risen since the early 2000s (Bick, 2007). Of the 47 study participants, eight hired a private coach (all of whom were track & field athletes). Track coaching is offered at \$50–\$100 per hour in most regions (Bick, 2007; MarinWaves, n.d.). In addition to funding private clubs or coaching, athletes had numerous outgoing costs, including race entry fees, travel costs for attending practices and races, uniforms, multiple pairs and types of track shoes and spikes, and equipment.

Lower income families had to find alternative means to support the growing costs of club memberships, clothing, and gear required for sports. Savannah applied for scholarships to fund her rowing club membership. Yet the scholarship did not cover the full costs associated with the sport. She recalled hosting a car wash, bake sale, and school fundraiser to fund her trip to the junior national team. Chantae’s family also lacked the resources to fully fund her sport:

My mom does hair, so her money was really inconsistent. One week she’ll have a good week when everyone comes in and gets their hair done. And then other weeks, she wouldn’t. And so, during club season, you have to pay for [the club]. And pay for your way to the meet. And have money to spend [at the meet] ...But, [somehow] she always got it done. (Chantae, interview, March 11, 2016)

Chantae could itemize the costs associated with her sport in a way that middle-class participants could not. She was acutely aware of the money needed for track because it pushed the family into the margins of their monthly budget.

The final way study participants accessed sports was through schools. Track remains a common extracurricular activity supported by U.S. secondary institutions (NFHS, 2015). *Extracurricular* refers to activities that are connected to schools but are not required or do not occur during the designated hours of school (Eccles & Barber, 1999). All track participants were on private or public high school teams where practice occurred before or after school. Even standout athletes who worked mostly with a private coach had to be affiliated with a high school team to be recruited to college. In contrast, only two rowers—both from the East Coast—accessed rowing through their public high schools. More commonly, if rowing is attached to a school, it is a private boarding school. Four participants accessed the sport through boarding schools. While these schools covered all the costs of the sport including coaching, clothing, race entry fees, and equipment, the cost of attendance is near \$60,000 per year.

Access to a community rich with economic, geographic, and institutional resources provided the first advantage in reaching the sports-track-to-college pipeline. The second mechanism, bureaucracies, further restricted participation.

BUREAUCRACIES

Social reproduction implicates bureaucracies—the rules that govern and organize an institution like a school—in maintaining class inequality (Anyon, 1983; Apple, 2004; McLaren, 2007). Both schools and sports at the K–12 levels have multiple bureaucratic organizations such as state and federal laws and regulatory agencies, school districts and boards, accrediting agencies, and credentialing agencies. To demonstrate the bureaucratic mechanism, one bureaucracy, the NCAA, and its impact on the sports-track-to-college pipeline is assessed.

The athletic recruiting process distinguishes college admissions for athletes. The NCAA governs the recruiting and admissions process in college sports nationally. The NCAA regulates how a college can interact with potential student-athletes in several ways. First, there is a timeline for when coaches can contact athletes. A college coach cannot speak to an athlete by phone or in person until September 1st of the athlete's junior year (NCAA, 2016). Starting on July 7th after their junior year, coaches can invite students to visit the campus. This triggers the second rule, or how many "official" campus visits a student-athlete can make. Each student-athlete is limited to visiting five schools on paid-for trips during their recruiting process (NCAA, 2016). This means that even if 10 schools offer paid-for visits to a potential recruit, they will have to decline half of the visits. The NCAA also monitors each visit by restricting the duration to 48 hours; restricting the money schools spend on food, housing, and transportation; and restricting what the student-athlete can do on their visit (NCAA, 2016).

To accept an official visit, prospective student-athletes must first be certified as an NCAA eligible student-athlete. This program ensures that the students are NCAA qualifiers or meet a minimum academic standard (NCAA, 2016). The qualifier system has a long and controversial history dating back to the 1980s, when it was first enacted to remedy growing national concern over athletes, such as Dexter Manley, who played football in college, graduated, yet remained illiterate (R. Smith, 2011). Since the 1980s, the NCAA has endured three revisions to the qualifier system. Today's standards reflect over a century of compromise within the NCAA regulatory body of how much autonomy to grant individual universities in governing their athletic programs (R. Smith, 2011). To pass the NCAA

eligibility certification, athletes must maintain a 2.0 high school GPA in 13 core courses and a combined SAT score of 700 (NCAA, 2016). The eligibility standards also include a sliding scale for GPA and SAT scores. If someone has a GPA higher than 2.0, they could earn a lower SAT score, and vice versa. The Qualifier Rule confirms the rumors that circulate among athletic communities: sports do hold lower admissions standards for athletes.

Coastal U has a highly competitive undergraduate admissions process. The incoming class of 2016 had a 17% acceptance rate with an average unweighted high school GPA of 3.90 and an average combined SAT score of 2125 (Coastal U Admissions Office, 2016). Since 2010, the athletic admissions policy at Coastal U has changed three times. In all revisions, the standards for athletic exceptional admissions remained well below the general student body standards. Flexible athletic admissions arose to evaluate student-athletes on athletic merit to produce a well-rounded incoming class (Schulman & Bowen, 2001; R. Smith, 2011). Suspiciously absent from NCAA policy are guidelines to evaluate athletic merit. Instead, coaches and support staff become the chief evaluators of athletic talent. The discretion afforded to institutional actors within the sports-track-to-college pipeline leads to the next interrelated mechanisms. Social access to those attached to the sports-track-to-college pipeline and access to knowledge about the pipeline and how to navigate it offer greater advantages in securing a college sport roster spot.

SOCIAL ACCESS & KNOWLEDGE

Bureaucracies set the rules and terrain in which people interact. One impact of establishing social order through bureaucracies is that people produce varied knowledges of how to navigate bureaucracies (Apple, 2004; Giroux, 1981). In this study, access to certain social relationships—with family, coaches, teammates—created knowledge to assist athletes through the sports-track-to-college pipeline. Two knowledge sets were co-constructed by social relationships in the pipeline: first, the knowledge of an alternative college admissions process for athletes; and second, the knowledge that there are rules and social mores to navigate said process.

Families were the first major social connection. Families who knew of the sports-track-to-college pipeline strategically enrolled their children in sports, financially invested in their athletic futures, and invested time into their development as athletes. Imani, a mixed-race middle-class track athlete, knew at an early age that she could use sports to access college. Growing up, her father, a former student-athlete, used the sports route to college. Her father told her, “Athletics [will] bring you to college’...

[He didn't] have me take all these AP classes. His view was that my performance in sports is what's going to carry me on" (Imani, interview, March 4, 2016). Imani's father enrolled her in a variety of sports at a young age, both recreational and club. She showed initial promise in swimming, winning many meets as a youth, practicing five or six days a week, but plateaued in the sport when she reached middle school. At that time, her father enrolled her in track. To develop her as a future track athlete, Imani's father paid for a private club and a private coach, did workouts alongside Imani, invested in a diet and exercise regime, and later, took her on a college road trip to meet coaches. All this time, money, and resources were geared towards Imani reaching her eventual goal of becoming a college-level athlete.

Some families went beyond private coaches or clubs and supplemented the athletic curriculum. Ten athletes recalled their parents creating additional workouts for them. Taylor, whose parents met as college runners, supplemented her coach's training schedule. They also supported her gym membership so she could do extra lifting. Most of all, they provided structure, resources, nutritional advice, and always encouraged her to "get more sleep" so she would be rested for practice (Taylor, interview, November 23, 2015).

Club and high school coaches were equally important social connections to offer knowledge of the recruiting process. For the athletes without athletic family members, the coach provided the vision that someone could be a college-level athlete. Fifteen participants said their coaches were the first to tell them they had the ability to compete in college sports. Alongside vision, coaches offered explicit recommendations. There is no universal template or application for how the college recruiting process proceeds. The word of a high school coach, especially one with a positive reputation, carried some athletes very far. Due to the inconsistent nature of college athletic recruiting, these recommendations did not come through a formal letter or reference process. Instead, the interactions happened in informal communication at high school level meets, international events such as World Championships.

Reggie, an international recruit, believed his high school coach's recommendation secured him admission and a scholarship.

Coach helped so much. Especially with getting [scholarship] money. Erg score wise, on paper, there's people who've done Worlds, got better scores, or better times... I [was recruited] a lot more based on personality, and like sort of, work ethic, just all around character, how someone carries themselves. (Reggie, interview, September 25, 2015)

Reggie did not have the athletic benchmarks that other athletes might. Instead, Reggie's coach used his connections and reputation to secure Reggie a spot at top U.S. rowing program.

While the NCAA regulates the cost and frequency of interactions between college coaches and high school athletes, it does not monitor the interactions between college and high school coaches. Personal connections between college and high school coaches allowed preferential access for certain recruits. The Coastal U coaches worked for the national team and were once college athletes. Their long history in the sport gives them a wealth of high school contacts to use when selecting athletes. Several of the rowers and track athletes had high school coaches that had gone to college with or worked alongside the Coastal U coaches. Brittany recalled her high school coaches acting as a go-between between the athlete and the future college before the July 1st recruiting deadline. "My high school coaches at the school I went to my senior year, they had also run track. So, they knew everybody, so I had a lot of connections. In that I was lucky. So, people would call my coach for me" (Brittany, interview, June 29, 2016). In Brittany's case, her high school coaches acted as her agents, selling and packaging Brittany's athletic ability to their contacts at the college level.

Teammates were the final major social relationship for Coastal U athletes. Teammates, like coaches, provided endorsements, access, and knowledge of the recruiting process. 40% of participants had older teammates who became college athletes. Sophia observed how her older teammates navigated the recruiting process, asking them questions along the way about how she could, in her remaining years as high school athlete, best prepare to be scouted by universities. Spring of her senior year, Sophia was denied admission to her dream school, a top Ivy League university. She decided she should take a year off, hoping to improve her SAT scores, and reapply in the fall. Then, one of her high school teammates, then a rower at Coastal U, mentioned that she should talk to the Coastal U coaches. In April of her senior year, Sophia contacted the coaches. The coaches had yet to use up their admissions spots allocated by the Coastal U athletic admissions policy. Based on Sophia's coach and teammate recommendation, they offered her a last-minute spot on the team. A few months later Sophia arrived at Coastal U.

Sophia's story showcases how unregulated recommendations from high school coaches and teammates can facilitate access. Her story also reflects the power that college coaches have in admitting athletes to universities. Athletes' entire admissions process came through the college coach. Participants recalled that college coaches told recruits they had leverage and could push an athlete through the admissions system. Iceman, who struggled throughout his whole K-12 career, explained:

Everybody said, “We can offer you a spot. Fill out the application.” They all had the same little spiel. “You’re not going to be super easy to get in, but we have pull in the admissions office and we can get you in.” (Iceman, interview, November 18, 2015)

More troubling, a dozen athletes remembered their coaches did most of their college application for them. Several of these athletes could not recall if they wrote a college admissions essay.

These instances most starkly illustrate the antimeritocratic mechanisms in the sports-track-to-college pipeline. Coaches leveraging their reputations, filling out applications, and skirting the admissions process reflect coordination between higher education and elite groups. Findings indicate that those connected to Whiter and wealthier communities are more likely to have the appropriate social connections and knowledge of the process and, in turn, greater access to the pipeline. The final section explains how students enact this knowledge in the recruiting process.

ENACTED KNOWLEDGE: NAVIGATING THE RECRUITING PROCESS

Those with connections to social actors with the knowledge of how to access and navigate the recruiting process had an immediate advantage in the pipeline. The three lower-income participants, Sanya, Chantae, and Savannah, lacked the family and community networks to mentor them through the sports-track-to-college pipeline. Instead, they were mentored by their high school coaches to become standout athletic contributors and ultimately become the exceptions to the reproduction process.

By elevating interpersonal interactions and subjective assessments, universities support an antimeritocratic athlete selection process. Only 12 participants were told that they must meet an athletic standard such as a time to be recruited to college. Instead, what an athlete needed to be considered eligible for Division I competition remained nebulous and required persistent and consistent effort on the part of the prospective athlete. In turn, schools can prefer participants who meet normative standards of acceptability, recreating rather than disrupting unequal social systems. Circulating through the pipeline were four ways students *should* approach universities: (1) contact coaches first rather than wait for coaches to contact them, (2) use proper etiquette when contacting a coach, (3) research and assess a school and program, and (4) negotiate an athletic scholarship.

The advice that students must contact college coaches led many to create elaborate marketing materials to sell themselves to prospective athletic programs. The most common marketing effort was to send an email of interest to coaches in colleges. High school coaches, teammates, or parents

helped draft the initial emails. Some took the résumé process a step further, creating detailed portfolios of achievements. These included an athletic history of all times, scores, meets, and regattas attended; any national team appearances; lists of prior teammates who were recruited to college; and excerpts from media coverage.

Stella never rowed crew but hoped to join a top program based on her athleticism in other sports. She heard through her kayaking teammates—a sport that shares little in common with rowing except water—that college programs would recruit athletes based on potential. Stella viewed the recruiting process as “fake it ’till you make it.” To her this meant pretending to be “a big deal—even though I wasn’t—I had to make it seem like I was” (Stella, interview, November 21, 2015). She did this through one clever marketing tool: “One of my [kayaking] coaches, she went to the Olympics a lot. So, she wrote me a letter, and I put an Olympic letter-head on it. It looked really cool” (Stella, interview, November 21, 2015). Once the Coastal U coaches were intrigued by Stella’s potential, she was invited to meet with them in person. During these interactions, she could “advocate for [her] self” to be admitted to the program. The interpersonal interactions between the coaches and student-athletes further showcase how characteristics like one’s personality can determine if they become a college-level athlete.

London, a Coastal U track athlete, had a similar experience to Stella during the recruiting process. As a high school freshman, London was on the cover of a local magazine. She sent this article, along with her high school transcripts, athletic résumé, statement of interest, and a coach’s recommendations prior to visiting over 20 schools. Once on campus, London treated meeting the coaches like interviews, or an opportunity to further market her strengths to the staff:

They’ll ask about your training, or a typical day, and then they also see on your résumé... So, I talked about debate. Or I’d talk about how the independence of being a track athlete transfers over to my school and academic life. I’d just purposefully weave in who I was into my answers. And I don’t think that everyone does that. But I just sort of knew that I had to. (London, interview, December 9, 2015)

As London reveals, she believed the recruiting process necessitated a strategy of human interaction to best present oneself as a potential student and athlete.

One way athletes increased their chances of impressing coaches was through paying for an unofficial campus visit. These visits are unregulated by the NCAA and give potential athletes more time in assessing an athletic program, coach, and university. As a result, the unofficial visit advantages

students with financial means, knowledge, and social connections. Of the three low-income students in the study, only one made an unofficial visit because she lived close to a university. Even then, her recruiting process unfolded through the regulated channels, as she went on two university-sponsored visits.

Nearly 60% of athletes made unofficial visits to Coastal U. Students set up unofficial visits relying on many of the skills, knowledge, and connections outlined above. Often, it began with an email asking for permission to visit the campus and meet the coaches. Those who made unofficial visits were surprised by the offer of admission during these informal conversations. Merlin, Imani, Terrance, London, and Josephine all received an admission offer during their unofficial visits. The advantages these well-connected and -funded individuals have expanded during the scholarship negotiation process.

Yet again, the NCAA has few rules as it relates to athletic merit scholarships. There are limits on the amount a student can receive in any given year, the amount of total scholarships a coach can have per sport, and the time a coach can offer a scholarship to a high school athlete, whereas there are no limits on how a student or coach negotiates a scholarship. There is also no requirement that schools consider an athlete's financial status when awarding scholarships. Consequently, there was no pattern in how participants earned scholarships based on athletic merit. While 35 participants believed athletic scholarships were an important motivator in their decision to pursue a sport, only 15 said they entered the recruiting process with the knowledge that it would take "negotiating" skills to earn a scholarship. Two of the more successful negotiating strategies included stating that they could not go to college unless they had funding or using offers from other schools as leverage. The first tactic was common for the low-income, out-of-state, and international students. These students truly could not pay their way, or, for international students, could not receive federal loans for Coastal U. The second tactic was to leverage offers from one school against Coastal U to get a better aid package. For seven of the students, this worked. Captain America pitted schools against one another. "[Recruiting] is like a betting game. Like, 'This college can give me this. What can you give me?'... I used my rowing abilities as a leverage to put myself out there for colleges to see what they could offer me" (Captain America, interview, October 29, 2015).

For eight participants, the game of chicken did not end in their favor. They turned down full scholarships from other institutions—schools they perceived as less prestigious than Coastal U. Four of these students were told that they could earn an athletic scholarship if they performed well once they arrived on campus, but the scholarship never manifested.

DISCUSSION

The sports-track-to-college pipeline uncovers how school-sponsored sports programs at the high school and college level converge during the athletic recruiting process by reproducing power structures. Findings reflected the two waves of social reproduction. The reproduction mechanisms emerged through life history interviews of those who benefited from the pipeline. In studying the reproductive channels, it is clear how elite groups actively construct and recreate the mechanisms that disproportionately benefit them, in effect securing their position in the class system. These findings provide new insights for both waves of social reproduction.

SPORTS-TRACK-TO-COLLEGE PIPELINE ACHIEVES REPRODUCTION

Athletes shared common experiences in navigating their pathway to college via athletics. These commonalities coalesced into five reproductive mechanisms. The first mechanism, *community access*, most closely parallels the first wave of reproduction (Bowles & Gintis, 1976). Descriptive statistics with a larger sample of Coastal U students and Olympic sport athletes demonstrated that admissions and recruiting processes for rowing and track & field were more likely to draw students from higher income, majority White, and high-ranking school systems compared to the general student body. These findings seemed to suggest a broad correspondence between White middle-class communities and the sports-track-to-college pipeline. Yet the greater representation of individuals from these backgrounds did not offer any insights into *how* the reproduction occurred.

Life history interviews denoted at least two features of athletes' communities that facilitated the pipeline: geography and institutional access. Within geography, both the natural landscape (climate and features like water needed for certain sports) and cultural landscape (historic connections and prevalence of prestigious programs) enhanced participation for athletes living in certain regions. Read another way, both features created sport deserts, or regions with no athletic access. This finding parallels the concentration of resource-rich public schools in wealthier areas which offer an inherent advantage to middle and upper-middle-class children matriculating to college (Leonardo, 2009; McLaren, 2007; Oakes, 2005). Here, the contributions from the second wave of reproduction further illuminate how plentiful access to low-cost historic and prestigious sports were not enough for middle-class participants. Instead, their families actively invested in furthering their athletic fortune by funding private clubs and coaching. To become a "serious" athlete they

paid for additional opportunities with private clubs or coaches. In other words, athletes were *concernedly cultivated* (Lareau, 2003).

Study findings resonated in other ways with the second wave of reproduction, namely how cultural processes, social connections, and individual actions secure reproduction. Bureaucracies and the imposition of regulation (and lack thereof) in the sports-track-to-college benefited middle-class athletes. One feature of reproduction noted in the evolution of the school system is how the centralization of educational governance strips autonomy from teachers in the educational process (Apple, 2004). The process of centralization has greater impact in lower income, lesser funded educational areas (Anyon, 1983; Apple, 2004; McLaren, 2007). Similarly, the highly centralized, hierarchical governing body of college sports, the NCAA, extends its bureaucratic reach more closely to lower-income participants. Those who cannot afford to fund their own recruiting trips to college must go through the scrutinized and regulated process of an official recruiting visit. Yet again this translates into greater freedom and autonomy as one moves up the class structure (Anyon, 1983). In effect, the absence of regulation in this instance led to greater access. Furthermore, the lack of standards regarding athletic merit in the admissions process was more often harnessed and used by middle-class athletes.

The intertwined mechanisms of social access, knowledge, and enacted knowledge show how mostly White middle-class athletes tailored the nebulous standards regarding athletic merit to secure access to an elite university. The social access needed to become a college athlete paralleled findings from educational studies of reproduction. A wide and interventionist social network included support from community members such as parents, coaches, and teammates, all of whom coached the athlete to secure admission. Two forms of knowledge were constructed as athletes and their social connections interacted with the NCAA's centralized bureaucracy. The politics of knowledge, or how certain knowledge forms become incorporated within and valued by the school system, also shapes reproduction (Apple, 1992, 2004; Giroux, 1981). Two knowledge forms elevated in the sports-track-to-college pipeline were 1) knowledge that the sports-track-to-college pipeline exists and 2) knowledge of how to best navigate the recruiting process. The construction of knowledge in educational settings is a dynamic process in that people are actively involved in shaping what becomes both the unofficial and official knowledge of school systems (Giroux, 1981). The knowledge forms in the sports-track-to-college pipeline were similarly constructed and disseminated by actors within the pipeline. Parents who knew of the pipeline acted upon their knowledge and tailored an athlete's trajectory accordingly. Coaches and teammates shared with their athletes and teammates how to join the pipeline and what strategies were needed to

best succeed within it. In extreme instances, social connections intervened on behalf of athletes by meeting with college coaches, offering recommendations, and negotiating scholarships. These interventions (re)created the definition of athletic merit to suit those attached to those with the financial means and social connections. Reproduction was achieved as merit was tailored to fit those most likely to be from middle-class communities.

The final mechanism, enacted knowledge, showcases how the active investment by middle-class communities in the sports-track-to-college pipeline secured their youth access to higher education. Like findings of school systems, there was an intentional investment by communities to coach and train athletes to interact with the pipeline in a particular manner (Calarco, 2014; Kaufman, 2005). In this way, the reproduction effects did not *passively* benefit middle-class communities; rather these communities actively protected their position in the class system. They shared knowledge within their networks encouraging athletes to enact at least four behaviors to access college: (1) contact coaches first rather than wait for coaches to contact them, (2) use proper etiquette when contacting a coach, (3) research and assess a school and program, and (4) negotiate an athletic scholarship. The result was that the coaching that middle-class athletes received seemed to *conveniently* align with the (lack of) standards offered by the athletic recruiting process. A striking form of reproduction occurred through athletic scholarships. These merit awards lacked rigorous and transparent criteria that would suggest merit. They were also detached from an athlete's economic status, allowing athletes like an upper-middle-class rower, Capitan America, to receive the full cost of out-of-state tuition and living expenses to attend Coastal U. In total, 30 participants received athletic merit scholarships despite their high economic standing. In effect, the institution gave resources to already advantaged groups.

EXPANDING SOCIAL REPRODUCTION THEORY

Findings also offer new insights for the application of social reproduction theory along three dimensions: horizontal, vertical, and ecological. The horizontal contribution is that social reproduction theory is applicable to athletics, suggesting this theory resonates in school settings beyond the classroom. While second wave reproduction scholars criticized Bowles & Gintis (1976) for not going within schools, this research demonstrates that it is important to view schools expansively and examine how other entities of education—namely, sports programs—contribute to reproduction. Offering a more encompassing definition of schooling also includes examining the outwardly expansive social networks that shape students, such as their relationships in extracurricular settings. In expanding the horizontal scope of schooling, one

could consider the vertical scope, or what other regulatory agencies shape schooling pipelines. This study implicated the NCAA as one such entity in the reproduction process. Finally, in expanding outward and upward, researchers should also consider the ecological dimensions of schooling, or how geography can shape reproduction. Previous social reproduction scholars include geography by considering how school settings, curriculum, and access favor suburban over urban and rural areas (Anyon, 1983; Lareau, 2003; Roscigno & Crowle, 2001; Tobin, Seiler, & Walls, 1999). This paper expands geography to include how the natural and physical landscape along with the urban infrastructure in each community facilitates reproduction.

STUDY LIMITATIONS

This study's methods had several limitations. First, Coastal U is a top-ranking public university. Recent research within higher education on upward mobility indicates that Tier 3 schools, state schools, and junior colleges offer better mobility chances for students (Bowen, Chingos, & McPherson, 2009; Brock, 2010; Haveman & Smeeding, 2006). Second, the study's vantage point is from the "success stories," or those who were included within the pipeline. In this way, the barriers to access the sports-track-to-college pipeline or those that may minimize access for low-income and/or people of color are not fully examined. A richer explanation of how the pipeline works may be found at the high school and lower sporting levels where athletes are "weeded out" or excluded from this route to college. Future research should consider whether these findings are consistent across regions, colleges, and for those excluded from the pipeline. Despite these methodological limitations, the findings from this qualitative study offer an important starting point to examine the presence of a sports-track-to-college pipeline that does not minimize but rather reinforces social structures by favoring members of privileged social groups.

CONCLUSION: DISRUPTING REPRODUCTION

The sports-track-to-college pipeline exhibited features within the school system that support an athletic pipeline to college and secures reproduction. Five reproductive mechanisms—community access, bureaucracies, social access, knowledge, and enacted knowledge—emerged as greater determiners for college athletic recruiting than individual athletic merit. Ten years of roster database analysis revealed that 2% of track & field and rowing athletes were lower-income. The few lower-income athletes who made it to college via sports are central to the reproduction process. The presence of "exceptions" disguises the system as meritocratic and reaffirms the belief in upward mobility via sports.

Finally, data revealed how participants actively shape reproduction. Rather than schools as wings of the state acting upon students, athletes co-constructed the sports-track-to-college pipeline by sharing information with one another, assisting one another to gain entry, and validating a narrow set of behaviors needed for athletic access. These actions further entrench the pipeline and limit access for future participants who do not conform to these behaviors.

In linking interscholastic athletic participation to social reproduction, this study shows that the remedies to minimize reproduction align with existing research. Lareau's (2003) purpose in studying differential class-based parenting styles was to "make the invisible visible" (p. 13). Outlining the sports-track-to-college pipeline mechanisms achieved the same objective. Another lesson from existing research is that reproduction cannot be stalled through educational adjustments alone. As Bowles & Gintis (1976) opined over 40 years ago, any progressive changes to educational institutions must accompany radical changes to the political and economic spheres:

we believe that the key to reform is the democratization of economic relationships: social ownership, democratic participatory control of the production process by workers, equal sharing of the socially necessary labor by all, and progressive equalization of incomes and destruction of hierarchical economic relationships. (p. 14)

The sports-track-to-college pipeline incorporates facets outside the purview of formal schooling setting such as private coaching and club membership, familial resources, and geographic locations. Minimizing the effect of these would require interventions as broad-based as Bowles and Gintis propose—namely, redistributing economic gains across populations.

In addition to working towards broad-based change, this research recommends several ways that K–12 schools, universities, and the NCAA could enact changes that would limit reproduction. First, secondary schools that sponsor sports should support students through the athletic recruiting process. Overwhelmingly, study participants said they received no assistance from their high school academic officials in the athletic recruiting process. This omission is particularly striking in light of the fact that that most athletic recruiting began with solicitation letters sent to the student's homeroom class.

Second, universities should require college coaches to develop criteria for assessing athletic merit. Universities already specialize in evaluation and assessment across a range of disciplines. Assessing athletic ability should receive the same scrutiny and transparency. Colleges should encourage coaches to team up with academics who specialize in evaluation and assessment. Together, they could develop rubrics for recruiting athletes. The rubrics

could include a combination of numerical (i.e., ranges of times, scores, or other statistical measurements) and holistic (i.e., criteria valued in an athlete such as “leadership”) assessments. Athletic departments should then make the assessments publicly available, and, as with other forms of evaluation, continually revisit and rework the tool for effectiveness.

Third, universities should integrate athletic recruiting into the campus-wide processes of recruitment and admissions. Rather than allowing coaches to drive the process, universities should drive and monitor the pipeline. The goal here is for the processes and standards for athletes and students to be as uniform as possible. In this vein, athletic scholarships should be allocated through a transparent application process. Like other scholarships offered by campuses, athletic scholarships should require all prospective athletes to complete an application. Once again, it is up to coaches to articulate how they determine athletic merit and how one can become eligible to receive a scholarship.

Fourth, recommendations two and three should be incorporated into recommendation one. Rather than assuming high schools will develop their own training on athletic recruiting, colleges should work with secondary schools to train their staff on athletic recruitment and admissions through offering free workshops and materials to students and administrators.

Finally, some advocate for changes to the fundamental model of college sports as an amateur activity governed solely by the NCAA (Branch, 2011; Gurney, Lopiano, & Zimbalist, 2017; Nocera & Strauss, 2016). Assuming college sports remain in their current form, there are at least three immediate steps the NCAA should take to make athletic recruiting more equitable. First, the NCAA should eliminate the “unofficial visit,” as this study demonstrated the various loopholes in these visits that secure reproduction. Second, the NCAA should eliminate the cap on the number of “official visits” a prospective student-athlete can make. Those interested in becoming college athletes should be allowed to attend as many university-sponsored visits as they like. Third, the NCAA should limit contacts between college and high school coaches to a letter of recommendation. This standardized letter would help systematize and illuminate the extent to which high school coaches could influence admissions. This letter should be incorporated in a transparent way so that the extent to which it would influence the process can be gauged.

As reproduction theory indicates, the above recommendations would not bring about the social, political, and economic revolution advocated by Bowles & Gintis (1976). But they could be an important first step in reforming the covert and irregular nature of the existing model of athletic recruiting and admissions that privileges already advantaged groups.

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APPENDIX A

Study Participant Background Characteristics

Participant (pseudonym)	Sport	Home	Hometown median income	Race	Caregivers' highest ed level	Athletic aid
Amanda	W. Crew	WA	\$99,597	White	Advanced	Partial
Andrew	M. Track	MN	\$68,513	White	BA	None
Anthony	M. Track	CA	\$139,709	Black	BA	Partial
Boris	M. Crew	The Netherlands	N/A	White	Advanced	Partial
Brandon	M. Track	IL	\$152,778	White	BA	Partial
Brittany	W. Track	CA	\$74,869	Black	BA	Partial
Camilla	W. Crew	CA	\$109,592	White	Professional	Partial
Captain America	W. Crew	CO	\$111,901	White	Professional	Full
Casey	W. Crew	CA	\$167,561	White	BA	Partial
Chantae	W. Track	CA	\$60,665	Black	HS	Full
Chelsea	W. Crew	CA	N/A	White	BA	Full
CM	W. Track	CA	\$109,762	White	BA	Partial
Cooper	W. Crew	WA	\$91,149	White	BA	Full
Duane	M. Track	CA	\$58,237	Black	Professional	Partial
Ella	W. Crew	Germany	N/A	White	Professional	Full
Erwin	M. Crew	NJ	\$132,440	White	BA	Partial
George	M. Track	CA	\$118,658	White	BA	Partial
Goose	M. Crew	TX	\$88,702	White	BA	None
Iceman	M. Crew	NY	\$38,235	White	BA	None
Imani	W. Track	CA	\$81,498	Black/ Spanish/ Japanese	HS	None
Josephine	W. Track	CA	\$81,498	Black	BA	None
Joy	W. Crew	MI	\$96,210	White	Professional	None
Kalie	W. Crew	WA	\$99,597	White	BA	Partial
Kayla	W. Track	CA	\$97,628	Chicana White	HS	Full
Laura	W. Crew	CT	\$211,313	White	BA	Partial
LeVar	M. Track	CA	\$69,044	Black	BA	Full

Participant (pseudonym)	Sport	Home	Hometown median income	Race	Caregivers' highest ed level	Athletic aid
Lisa	W. Crew	Germany	N/A	White	BA	Full
London	W. Track	CA	\$136,150	White/ Middle Eastern	BA	None
Malcolm	M. Track	CA	\$82,420	Black	Professional	Full
Merlin	M. Track	CA	\$108,211	White	BA	Partial
Monique	W. Crew	CA	\$167,561	White	HS	Partial
Morgan	W. Crew	NY	\$120,860	White	Advanced	Partial
Noelle	W. Crew	CA	\$69,944	White	BA	None
Physicist	M. Track	CA	\$135,578	White	Professional	Partial
Reggie	M. Crew	Australia	N/A	White	Advanced	Partial
Sanya	W. Track	CA	\$114,764	White	BA	Full
Savannah	W. Crew	CA	\$92,192	White	HS	Partial
Seamus	M. Track	CA	\$87,329	White	HS	Partial
Sophia	W. Crew	NJ	\$117,727	White	Advanced	None
Stella	W. Crew	HI	\$85,837	White	Advanced	Partial
Steve	M. Crew	UK	N/A	White	Advanced	None
Taylor	W. Track	CA	\$109,693	White	BA	Partial
Terrance	M. Track	NV	\$60,027	White	Advanced	Partial
Tyrell	M. Track	CA	\$92,433	White	HS	None
Vera	W. Track	Germany	N/A	Black/ Haitian/ German	HS	Full
Victoria	W. Crew	Canada	N/A	White	BA	Full
Will	M. Crew	Australia	N/A	White	Advanced	None

APPENDIX B

Excerpts from Coding Process for Qualitative Interviews

Table B1.

Fixed Code* (Higher order)	Axial Code	Open Code (Lower order)
Social relationships	Coach (role in the recruiting process)	Strong reputation; was a former Olympian; was a former college athlete; coached for the national team; met with prospective college coaches; offered knowledge of recruiting process; offered vision of pipeline; recommendation; had ties to Coastal U; marketed athlete; helped with college application
	Teammates (role in the recruiting process)	Older teammate recruited to University; older teammate recruited to Coastal U; knowledge of recruiting process—contacting coaches, bureaucracy, admissions standards; knowledge of athletic program; offered college recommendation; connection to the national team
	Family/caregiver (role in the recruiting process)	Former college athlete; knowledge of sports-track-to-college; encouraged sports participation; supplemented athletic curriculum; acted as coach; financial investment; achievement pressure; knowledge of recruiting process; marketed athlete; commuting for sports; no knowledge of sports; discouraged sport participation

*Fixed codes emerged from social reproduction theory. This sample of the coding process is connected to the fixed code “social relationships.” Social relationships are a central mechanism of social reproduction. Here, the axial code (and corresponding theme) is how three social relationships—coaches, teammates, and family members—facilitated the recruiting process.

Emergent Code* (Higher order)	Axial Code	Open Code (Lower order)
Geography	Community characteristics	International; Midwest; Southern CA; East Coast; Northern CA; Pacific Northwest; Suburban; Urban; Rural; Small town; community spectated school sport; Proximity to university; College-going community; Beach community; predominantly White; predominantly immigrant; predominantly people of color; predominantly middle-class; community-sponsored sports opportunities; racially segregated
	Sport-specific geography	Landscape specific to sports; Water access for rowing: calm water, marinas, docks; Weather (specific to sports); School or community located on or near water; Weather impacting sports participation: frozen lakes restricted rowing in the winter; snow impacted track & field in the winter; heat impacted track & field in the spring/summer

Emergent Code* (Higher order)	Axial Code	Open Code (Lower order)
Cultural characteristics	New England (known for rowing); Pacific Northwest (known for rowing); Southern California (known for track & field); Midwest (known for ice hockey); Canada (known for skiing and ice hockey); Southern California (known for prestigious high school track & field races); East Coast (known for prestigious high school track & field races); East Coast (known for rowing; connection to rowing national team)	

* Came from “open coding process.” The open coding process revealed a variety of insights that coalesced into the subtheme “geography.”

Sample of coding

Excerpt from an interview with Noelle. She began rowing in the fall of her senior year (typically when the college recruiting process starts). In this excerpt she describes how, even with no experience in the sport, she was recruited to Coastal U.

I reached out to Coastal U (**marketing effort**). My [high school] coach rowed at Coastal U, so I think that helps (**high school coach; ties to Coastal U**). They respected, they know him (**high school coach; strong reputation**). Coastal U’s coach and my coach actually rowed together... (**high school coach; ties to Coastal U**). They knew of his coaching. The stroke is very similar, [to Coastal U] (**sport-specific knowledge**) So I think that definitely helped. And so they were aware of him. (**high school coach; strong reputation**). And [Coastal U coaches] invited me back [for a recruiting visit], pretty much right away. With no experience, to come on an unofficial/official. Because I live so close. (**unofficial visit; geography; proximity to university**) They were like ‘there’s no point in coming and stay, because you’ve literally been doing this for a month. But come and check it out.’ And I was like, ‘Sounds good. I’ll come.’... (**communication with Coastal U coaches**) I think I was pretty lucky. Some luck in there (**individualism**).

APPENDIX C

Median Income Comparison Across Student Populations

Estimated Family Income*	Coastal U Students	Coastal U Athletes	Coastal U Crew Team	Coastal U Track Team
Less than \$50,000	24%	1.94%	0.78%	2.77%
\$50,000 to \$79,999	14%	31.17%	23.50%	36.60%
\$80,000 to \$124,999	23%	43.61%	42.03%	44.73%
\$125,000 or more	38%	23.27%	33.68%	15.90%

*United States Census Bureau (2016) data, represented in 2014 dollars

APPENDIX D

Academic Background Comparison
Across Coastal U Student Populations

	Private High School	Public High School	Boarding School or other	Majority White High School	Other Race Majority High School	Low API Scoring High School
Athletes	24.55%	73.48%	2%	42%	30.5%	14.64%
Crew Team	30.80%	65.21%	3.99%	55.56%	22.88%	9.30%
Track Team	19.80%	79.77%	0.43%	34.38%	35.17%	17.82%
Students*						15.9%

*Datasets used for this study did not include the demographic or high school characteristics for the “student population.” The only comparison data available, included in this table, was the API score.

APPENDIX E

Membership Costs for Top* U.S. Rowing Clubs

Name	Location	Total**
Marin Rowing	Larkspur, CA	\$1,870
Pittsford Crew	Pittsford, NY	\$1,300
Mercer Crew	Princeton, NJ	\$1,600
Oakland strokes	Oakland, CA	\$3,700
Connecticut Boat Club	Norwalk, CT	***
Newport Aquatic Center	Newport Beach, CA	\$3,900
Sarasota	Osprey, FL	\$2,650
Saugatuck	West Port, CT	\$3,900
Cincinnati Junior Rowing Club	Newport, KY	\$1,850
Chicago Rowing Foundation	Chicago, IL	\$3,300

*Rankings came from U.S. Rowing race results, 2015.

**Included any publicly available fees such as membership dues, coaching fees, and cost of uniforms. Excludes travel costs.

***Financial information was not publicly available.

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