Race and Athletics

White Men Can’t Jump?

There are biological differences between the races that make some races more athletic than others

- True 11.1%
- False 88.9%

White or Black?

- Which race has 7 of 10 best highest jumps of all time based on height cleared?
- Which race dominates the world rankings of high jumpers from 1947 – 2002 for men and 1956 – 2002 for women?
- Which race has 11 of the 15 best outdoor high jumpers of 2008 including the top 4?
- Which race has won almost all of the high jump gold medals in 120 years of Olympic Competition?
  - No African athlete has ever won ANY Olympic high jump medal

So...

there must be a jumping gene that puts Black athletes at a disadvantage, right?
Did you know...
- The “World’s Greatest Athletes” of the last century have overwhelmingly been White
  - The Olympic decathlon gold medalist has traditionally been given the title of “World’s Greatest Athlete”
  - Of the first 24 Gold Medals awarded in the decathlon, 2 went to Black athletes
    - 1 to half Native American Jim Thorpe
    - 3 others had one Black parent
    - 17 of the medals were won by athletes with two White parents

Did you know...
- After the 2012 Olympic Games in London, the U.S. lead all the world’s nations with 2,552 medals won in both Summer and Winter Olympics
  - The overwhelming majority of those medals were won by White athletes
  - The rest of the top 10 countries for Olympic medals are all European countries with only a handful of Black athletes—except for China at number 9 with NO African athletes.

Did you know...
- The first African country (Kenya) comes in at 37th on medal list
- As of 2011, there was only one Black athlete among the top 75 medal earners
  - Carl Lewis, U.S. track and field star comes in at 20th on the list
  - There are 72 White athletes in the top 75 and two Japanese athletes
  - No Black Africans make the top 75

So it’s obvious that White folks are genetically superior athletes, RIGHT?

Or maybe athletic performance is about something besides race!
How did we get the idea that Africans are superior athletes?

Sports Participation of African Americans

- Mostly excluded from competition prior to the Civil War
  - Slaves used by owners to stage boxing matches
    - Slave could be manumitted for winning enough
    - Tom Molineaux was born a slave in 1784
    - Fought his way to freedom
    - Began boxing other slaves while plantation owners bet on the bouts
    - After defeating a slave from a rival plantation, he was given his freedom and $500

Late 19th – Early 20th Centuries

- After Emancipation
  - Black athletes excelled in some sports: Boxers, Jockeys
  - Limited because of Jim Crow laws
    - Blacks barred from professional baseball, football, and basketball
    - Formed all-black teams and leagues
    - Forced to act as entertainers within prevalent racial stereotypes to make money—Harlem Globetrotters

Black League Entertainers

The Harlem Globetrotters began in Chicago in 1926 as the “Savoy Big Five.”
20th Century Sport Participation

- Continued segregation between the two World Wars
  - Some Black athletes experience success
    - Boxing--Joe Louis
    - Track--Jesse Owens
- Integration of professional sports starts after WW II
  - Kenny Washington in 1946, NFL
  - Jackie Robinson in 1947, MLB
  - Collegiate athletics in the 1950-1970s

Sam Cunningham

- 135 yards, 2 touchdowns, against an all-white University of Alabama football team, as the University of Southern California beat Alabama 42-21 in Birmingham on September 12, 1970
- Reportedly factor in convincing UA and its fans to let Coach Bear Bryant integrate Southern football
  - Jerry Claiborne, a Bryant assistant, said, “Sam Cunningham did more to integrate Alabama in 60 minutes than Martin Luther King did in 20 years.”
  - Bryant had already signed a Black player in 1970, (John Mitchell) but he couldn’t play him until 1971

Racial Smog:

Racial ideologies influence how athletes are assessed in society and in science

"Of course white folks are good at this... after 500 years of colonizing by sea, they've been here to have exceptional sailing genes!"
Racial Ideology in Sports

Achievements of White Athletes are perceived to be due to:
- Character, Hard Work
- Intellect
- Organization

Achievements of Black Athletes are perceived to be due to:
- Biology
- Natural physical abilities
- Genetically fortunate

The Racially “Natural Athlete”?

The idea of the natural physicality of African Americans has been around since slavery and was voiced publicly by many figures like Jimmy "the Greek" Snyder, Rush Limbaugh, and Jon Entine in his 2001 book about Black Athletic Dominance. "The Negro excels in the events he does because he is closer to the primitive than the white man. It was not long ago that his ability to sprint and jump was a life-and-death matter to him in the jungle.”

Dean Cromwell, asst. head coach to the U.S. track team at the 1936 Berlin Olympics where Jesse Owens excelled.

Jimmy 'The Greek' Snyder

On January 16, 1988, Jimmy "The Greek" Snyder was fired after 12 years as a CBS football analyst for remarks he made to a reporter about the physical abilities of black and white athletes.

"[the black athlete is] bred to be the better athlete because, this goes all the way to the Civil War when ... the slave owner would breed his big woman so that he would have a big black kid.”

Rush Limbaugh on Donovan McNabb

Sorry to say this, I don’t think he’s been that good from the get-go. . . . What we have here is a little social concern in the NFL. The media has been very desirous that a Black quarterback can do well—Black coaches and Black quarterbacks doing well. . . . There’s a little hope invested in McNabb, and he got credit for the performance of his team that he didn’t deserve. The defense [has] carried this team.

(ESPN, September 28, 2003)

On January 31, 1988, in San Diego, California, Doug Williams of the Washington Redskins becomes the first African-American quarterback to play in a Super Bowl, scoring four of Washington’s five touchdowns in an upset 42-10 victory over the Denver Broncos in Super Bowl XXII.
Black vs. White: Perception

As Harrison notes: Michael Phelps was clearly the most outstanding athlete at the 2008 Beijing Summer Olympics with eight gold medals
- The narrative focused on his coaching, his mother's dedication to him as a child, his single-minded pursuit of Mark Spitz, and to a lesser degree his physical attributes such as arm length and feet size

Another outstanding performer was Usain Bolt, who set world records in both the 100- and 200-meter dashes
- Bolt is Jamaican and as soon as Bolt set these records, articles began appearing describing a particular genetic variant (ACTN3) that is very high frequency in Jamaicans, but lower frequency among Americans
- This genetic difference was suggested as the rationale for Bolt's success

Black vs. White: Perception

Many of the same muscle groups are involved in sprinting and swimming
- Why wasn't Phelps’ dominance in the pool the result of specialized genes for swimming?
- Why wasn't Bolt's success on the track the result of his coaching or mother’s dedication?

Stacking in Sports

Racial segregation by position
- Central positions reserved for White players
  - Pitcher, catcher, quarterback, center
- Peripheral positions for minority Players
  - Outfielders, wide receivers, defensive backs
Position requirements also play a role
- White: positions requiring intelligence, control
- Black: positions requiring speed, strength, “natural ability”
### NFL 2008 starters (67% of players Black)

<table>
<thead>
<tr>
<th>Position</th>
<th>% White 2008</th>
<th>% Black 2008</th>
<th>% Other 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterback</td>
<td>81%</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>Running back</td>
<td>0</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Wide receiver</td>
<td>5</td>
<td>92%</td>
<td>3%</td>
</tr>
<tr>
<td>Tight end</td>
<td>56%</td>
<td>41%</td>
<td>3%</td>
</tr>
</tbody>
</table>


Here is his take on how Africans dominate running events:

- Not one of these record holders is from an African country—every one is likely admixed with “White” ancestry.

More from Entine:

- Highly heritable characteristics such as skeletal structure, the distribution of muscle fiber types, reflex capabilities, lung capacity, and the ability to use energy more efficiently are not evenly distributed across racial groups.
  - But we know the genetics, if any, underlying these disparities are certain to be more variable within “racial groups” than between them!
  - And there is more variation among Africans than any other “racial” group

And another Entine-ism:

- Consider diving, gymnastics, and ice-skating, sports in which East Asians excel” for which he gives a body build explanation
  - He suggests that because of Bergmann’s and Allen’s rules, the broad, muscular body type has been selected for among Asians.
  - Might want to consider political factors:
    - In order to excel at these sports in the international arena, China began a program of identifying children at a very early age and taking them from their parents for intensive, long-term training in selected sports
    - Sounds more environmental than genetic!!
Racist Perspective
- Blacks dominate some sports because of innate physical supremacy
- Early arguments about anatomical differences have given way to genetic arguments such as those offered by Jon Entine in “Taboo”
  - Especially the genetics of muscle cell type, i.e., slow twitch versus fast twitch

Muscle Cell Types Argument
- According to Racists:
  - West African athletes (including African Americans and Afro-Caribbeans) have more fast twitch muscle fibers that makes them dominate in sprinting and jumping
  - East African athletes have more slow twitch muscle cells allowing them to dominate in distance running events
- Actual research shows this to be a non-factor in world class athletes from both groups

Muscle Cell Type Facts
- Elite sprinters show about 80% fast twitch muscle cells and elite endurance athletes show about 80% slow twitch cells
  - Regardless of “RACE”
- Racists argue that the proportion of fast vs. slow twitch muscle cells is determined genetically and varies according to race

Muscle Cells
- Overall average in all populations is about 50% slow twitch, 50% fast twitch
- Substantial individual variation within populations
<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Type I fibers</th>
<th>Type II A fibers</th>
<th>Type II B fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraction time (&quot;twitch&quot;)</td>
<td>Slow</td>
<td>Fast</td>
<td>Very Fast</td>
</tr>
<tr>
<td>Fatigue Resistance</td>
<td>High</td>
<td>Intermediate</td>
<td>Low</td>
</tr>
<tr>
<td>Activity Used for</td>
<td>Aerobic</td>
<td>Long term anaerobic</td>
<td>Short term anaerobic</td>
</tr>
<tr>
<td>Force production</td>
<td>Low</td>
<td>High</td>
<td>Very High</td>
</tr>
<tr>
<td>Mitochondrial density</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Capillary density</td>
<td>High</td>
<td>Intermediate</td>
<td>Low</td>
</tr>
<tr>
<td>Oxidative capacity</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Major storage fuel</td>
<td>Triglycerides</td>
<td>CP, Glycogen</td>
<td>CP, Glycogen</td>
</tr>
</tbody>
</table>

**Genetics of the sprinting/endurance gene**

- **ACTN3** gene codes for the actin-binding protein α-actinin-3 (α-Atn3), a component of the contractile machinery in fast (type II) skeletal muscle fibers.
- A SNP mutation, R577X, makes this protein non-functional, reducing contractile speed in type II muscle cells.
  - Change from codon for Arginine to STOP
  - The homozygous genotype (577XX) is extremely rare in elite sprinters from all parts of the world who have been tested to date.

**Why Associate Race with Athletic Performance?**

- According to Entine, Africans are superior runners
  - East Africans are superior at endurance sports, West Africans at sprinting and jumping, and Whites excel at neither (bad genes).
- But if East and West Africans are at either end of a genetic spectrum of athletic abilities why consider them to be part of a single race, and one that is distinct from whites?
  - Only because in the U.S. we use skin color as the key criterion of racial difference.
Entine’s African Runners

Entine’s Kenyans

Does this look like a trait distributed along “racial” lines?

Kenyans from the Kalenjin region are vastly over-represented as winners of distance running events (10k - marathon)

Racists like Entine insist that this is a genetic phenomenon distributed by race

- They suggest muscle cell genes (like ACTN3) or testosterone genes (like CYP3A4, SRD5A2, HSD3B2), or a variety of altitude related genes

How About the Kalenjin?

Researchers looked at elite runners, Kalenjin boys from cities, Kalenjin boys in rural villages, and Danish boys living in Copenhagen

- No difference in slow-twitch between elite Kalenjin and European runners
  - Same for Danish boys and Kalenjin boys from cities or rural villages

- Active Kalenjin boys from villages had similar VO₂ max to active Danish boys
  - Both higher than Kalenjin boys from cities, who were much less active

How About the Kalenjin?
How About the Kalenjin?

- 3 months training had same result in Kalenjin and Danish boys
- As expected from Bergmann’s and Allen’s rules, the Kalenjin and Danish boys had body type differences
- Kalenjin boys had relatively longer legs

How About the Kalenjin?

- Kalenjin boys were 2” shorter than the Danish boys, but had legs that were about ¾” longer
- The volume and average thickness of the lower legs of the Kalenjin boys was 15 to 17 percent less than in the Danish boys
  - The significance of this is that the leg is like a pendulum, and the greater the weight at the end of the pendulum, the more energy is required to swing it

How About the Kalenjin?

- This gives the Kalenjin a distinct advantage in running economy
  - A measure of how much oxygen a runner uses to run at a given pace
- The “Nilotic” body build with long lean legs provides an ideal form for distance running
- Same body build is found in elite marathoners from all “RACES”

Kalenjin Dominance

- Even before Kenya began to dominate the international distance running scene the general population in countries that had dominated distance running—Britain, Finland, the United States—were growing increasingly wealthy, increasingly overweight, increasingly interested in other sports, and increasingly less likely to train seriously in distance running
Between 1983 and 1998, the number of men who ran under 2:20 in the marathon:
- U.S. declined from 267 to 35
- Great Britain declined from 137 to 17

In 2000 U.S. qualified only one man for the Sydney Olympic marathon
- Finland which was the top distance running power in the world between WW I-II when it was a poor rural country, failed to qualify a single distance runner in any event at the 2000 Olympics
- “The genes didn’t go away in Finland, the culture did.”

Meanwhile, Kenya jumped from 1 sub-2:20 man in 1980 to 541 in 2006
- Kenyan marathoners really exploded in the mid-1990s, as the notion in Kenya that marathon training caused male infertility receded, and after Kenya’s sports commissioner allowed agents into the country and removed travel restrictions on athletes

Eero Mäntyranta cross-country skiing great from Finland
- Gold in the 4X10k relay in 1960 Olympics
- 2 golds and a silver in 1964
- A silver and two bronzes in 1968
- Found to have an EpoR mutation that causes an excess of red blood cells
  - More red blood cells leads to better aerobic capacity

Athletes of West African descent living in North America, Western Europe and the Caribbean dominate many sports
- But contemporary West Africans don’t
  - This is the opposite of expectations if athletic ability was primarily genetic

In the U.S., admixture between black and white populations means that the African American population carries, on average, some 30% genes of European descent
- African Americans should be poorer athletes than West Africans—*the reverse is true*
A reminder about the Distribution of Genetic Diversity

- Africans are more genetically variable than populations from other regions
- EurAsian genetic variability is almost entirely a subset of the variability represented in Africa!

European
Asian
African

For Those Arguing for a Biological Basis for Black Dominance in Sport

- There are several problems
  - Who is considered Black?
  - Social variables
    - Why do Africans from some parts of Kenya excel at distance running and other Kenyans don't?
  - Racist implications
    - Blacks suited for physical activities—harks back to attitudes during slavery

What race is Tiger Woods?

Self → CABLNASIAN
- ¼ African American
- ¼ Thai
- ¼ Chinese
- ⅛ Native American
- ⅛ White European

U.S. = Black
Brazil = Whitish
Genealogy = Asian

Race-linked cultural differences

- Emphasis on some activities while ignoring others
  - Kalenjin of Kenya represent 0.05% of the world's population and win ~40% of top international distance running competitions
    - Their major biological advantage appears to be the long slender legs
    - Why are they absent from the Tour de France or cross-country skiing?
- If Black dominance in the NBA is facilitated by jumping ability, why don't they dominate the high jump and pole vault in track?
10,000 hour rule  
(from Outliers by Malcolm Gladwell)

- Estimate of the practice time it takes to master a skill  
  - Chess, violin, football, physics, etc.
- With regard to acquisition of physical skills this can be highly variable  
  - E.g., Eero Mäntyranta had mutation that made aerobic training much more effective than for most people  
    - Far less than 10,000 hours required to achieve mastery  
    - How much and what kind of training works is dictated by individual genetics and physiology—not RACE

How Does This Work in Athletics?

1. Exposed to a limited set of activities as a child
2. Tend to gravitate toward those that best suit the individual’s body type, physiology (twitch type)
3. Practice favorite sport  
   a. Get coaching, tutoring, etc.
4. Get noticed and use sport to further personal goals

But Why Some People and Not Others?

- Remember the wealth gap that shapes educational and occupational opportunity in the U.S.?
- If there is a real and/or perceived impediment to achieving personal goals, alternatives are likely to be pursued
- If a kid growing up is told from the beginning that he’s not good at school but he may be good at running (or throwing, etc.) he is likely to pursue athletics

Sporting Chance?

- In spite of the high risk, low likelihood of reward of professional athletics as a career choice, it may be perceived as the ONLY way to succeed
- This serves as a strong motivation to use those early hours and years of practice to achieve personal goals
- Motivation is an overwhelmingly important factor in athletic performance!
Perception Bias

• Because football and basketball are the most widely broadcast sports in the U.S. we focus on Black participation in these sports
• “White athletes dominate international football (soccer), too. This is probably the world’s most popular sport, yet no African nation has ever won the World Cup or even made it to the final match.”

Racial Wealth Gap

• Generation after generation of poverty
• Struggle against institutional racism
• Try to circumvent the system by using sports as a means to improve educational and occupational opportunities

Poor Opportunities
• Housing
• Education
• Health Care
• Occupation

Summary

Are there genetic differences between individuals that may influence athletic performance?
**Definitely**

Are there genetic differences between populations that may influence athletic performance?
**Almost certainly**

Might skin color genes and physical performance genes be connected?
**It is highly unlikely that any of the genes that influence skin color also affect athleticism**

Summary

Are there genetic differences between RACES that may influence athletic performance?
**Not likely since that’s not how genes are apportioned**

Is athletic performance in sports related to cultural definitions of skin color and race?
**Absolutely**

Do cultural notions about race influence the meaning given to athletic performance?
**YES**
So, if White men can’t jump

Why do they continue to win gold medals in the Olympic high jump?

2012 Olympics: Canada’s Derek Drouin (bronze), Erik Kynard (silver), Russia’s Ivan Ukhov (gold), Britain’s Robert Grabarz (bronze), and Qatar’s Mutaz Essa Barshim (bronze)

Don’t forget that the flip side of “White Men Can’t Jump”

Is “Black Men Can’t Think”

Leon Kamin (2001)