

KENYA'S RUNNING TRIBE

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This article is about a tribe in Kenya that has a remarkable faculty for turning out world class distance runners. The people are called the Kalenjin. They occupy an area about the size of Wales and they number something under 3 million, or about 10 % of Kenya's population. But this group has earned about 75% of Kenya's distance running honors. That number is impressive enough, in view of the degree to which Kenya now dominates the sport, but looked at another way, the figures are even more remarkable: over the past 10 years, athletes from this small tribe have won close to 40% of all the biggest international honors available in men's distance running.

Most of this article will be a discussion of various notions that have been advanced to account for this phenomenon, but before going into that I want to throw out a few more numbers to show what I mean by that 40% figure. First, I want to make it clear that I am talking about men's distance running. Kalenjin women - African women in general - have lagged behind their male counterparts for reasons I am afraid I will not have time to get into.

Now, the Kalenjin excel in varying degrees in all three of distance running's disciplines: cross country, road racing and track. I will take them one at a time, starting with cross country.

Three weeks ago, the annual World Cross Country Championships were held in Turin. I do not know how much coverage the press here gave the event, but from an international perspective, the World Cross Country Championships are a big deal. In fact, it is often said that the men's championship is the toughest of all foot races to win because it attracts the world's best at distances from the mile to the marathon, and each country can enter not just three runners, but nine. In this year's men's race there were 280 competitors from 60 different countries, most of them hoping

somehow to upset the Kenyan juggernaut, but in the end, out of those 280 runners, five of the first seven to finish were Kenyans - and four of those five were Kalenjin.

Remarkable as it may seem, this result is fairly typical. Since 1986, when Kenya began taking these championships seriously, the country has yet to lose the men's team race. And Kalenjin athletes have made up fully three-quarters of the scoring runners on those 12 winning Kenyan teams. In fact, in eight of the 12 winning years, if only the Kalenjin runners had competed, they would still have taken the team title. What is more, of the 36 individual medals awarded in the men's competition in those 12 years, Kalenjin runners have won 18, precisely half the total.

In road racing, Kalenjin participation has been comparatively limited until recent years, but they have had a perceptible impact at the top - the unofficial "world best" times for the standard road race distances. Kalenjin men own the world bests at five of the eight commonly run distances shorter than the marathon, and in two of the remaining three, Kalenjin runners have bettered the listed world best while running in longer races. As for the marathon itself, a Kalenjin claims history's second fastest time - 2 hours, 7 minutes, 2 seconds - and Kalenjin runners have won the Boston Marathon, the world's oldest and most remunerative road race, four times since 1988. In fact, at last year's Centennial Boston Marathon, the richest road race in history, Kalenjin runners took the first two places, three of the top five, five of the top eight and 12 of the top 18.

But nowhere in road racing do Kalenjin achievements compare with the record they have built up in the more exacting discipline of track. Here we are talking about distances from 800 meters to 10,000 meters, and success in these events is measured mainly in two ways: medals and times. I will start with medals. First, Olympic medals. Kalenjin distance runners have won 26, eight of them gold. The only meaningful numbers to compare this to are medals won in men's distance events by whole countries during approximately the same period. If we begin in 1964, the first Olympics to which Kenya sent more than a token contingent, and if we exclude the two Olympics that Kenya boycotted - 1976 and 1980 - the nearest national total is the 10 medals won by the U.S. Next, I am happy to tell you, is Britain, with eight. Fourth place, seven medals, is a tie between Morocco and non-

Kalenjin Kenya. Here are the leading national totals, medals and gold medals. As you can see, in the Olympics in which they have fully participated, Kalenjin distance men have won nearly three times as many medals and three times as many golds as rivals from any whole country.

MEDALS, MEN'S TRACK EVENTS 800m TO 10,000m

Olympic Games, 1964-96 (excluding boycotted Games of 1976 & 1980)

	All Medals	Gold
Kalenjin	26	8
USA	10	3
GB	8	1
Non-Kalenjin Kenya	7	4
Morocco	7	3
Germany (East & West)	6	1
Ethiopia	5	1
Finland	4	3
New Zealand	4	2
Tunisia	4	1

Until 1983, the Olympics were the only worldwide open competition in track and field. But in that year the sport's governing body introduced the Athletics World Championships, which provide Olympic-level competition without the Olympics' political baggage. Kenya has participated in each of the five World Championships so far, and Kalenjin distance men have built a record much like the one they have established in the Olympics: 17 medals and nine golds. The countries that come closest are Germany (East plus West), with eight medals and two golds, Morocco with seven medals and one gold, and non-Kalenjin Kenya, with five and three.

If we concentrate on more recent worldwide competition - say, in the last 10 years - the medal totals become altogether lopsided. In three Olympics and three World Championships, Kalenjin distance runners have won 31 medals and 12 golds in men's track events - 34% and 40%, respectively, of the available totals. The nearest whole countries are Morocco with 11 medals and Algeria with four golds (all won by Noureddine Morceli), each

total equal to about one-third that of the single Kenyan tribe.

So much for medals. The other gauges of success on the track involve recorded times. The most comprehensive of these are what are called all-time lists, which set out in order the top performers in the whole history of an event, strictly on the basis of their best recorded times. As you might expect, Kalenjin runners are well represented. Here are the number of Kalenjin appearing in the all-time lists for the five Olympic distance events at three different levels—top 10, top 20 and top 50:

NUMBER OF KALENJIN IN MEN'S ALL-TIME LISTS

Event	Number of Kalenjin		
	Top 10	Top 20	Top 50
800	2	7	13
1500	0	4	13
5,000	3	6	13
10,000	5	7	13
3,000 St.	9	13	20
	19 / 50	37 / 100	72 / 250
	38%	37%	29%

If we tally up these figures for all five events, we find that members of the tribe make up 38% of the all-time top 10, 37% of the top 20 and 29% of the top 50. But even these numbers do not quite convey Kalenjin runners' enormous recent impact. That shows up more clearly in annual rankings from the last several years. These are also based solely on recorded times. Here are the numbers of Kalenjin in the top 10 in the five years from 1992 to '96:

NUMBER OF KALENJIN IN ANNUAL TOP TEN LISTS

Event	1992	1993	1994	1995	1996
800	4	5	4	5	5
1500	4	2	2	2	6
5,000	3	3	3	5	3
10,000	2	4	3	4	5
3,000 St.	7	4	6	9	9

20	18	18	25	28
40%	36%	36%	50%	56%

Another quick tally reveals that in the last five years Kalenjin runners occupied 43.6% of the top ten spots in the five men's endurance events. Take this together with their 38% of the top-ten spots on the all-time lists for those events, and the 34% of all Olympic and World Championship medals they have won in those events since 1988. Then throw in their collection of world bests in road racing and the incredible 50% of all men's medals that they have won at the World Cross Country Championships since 1986, and you can boil this down to the generalization I made at the beginning: in recent years, of the biggest worldwide honors available in men's distance running, Kalenjin runners have won something like 40%.

I contend that this record marks the greatest geographical concentration of achievement in the annals of sport, and if we had time I would welcome arguments to the contrary, but for now, let us look at what makes these people so good. There has been a fair amount of published speculation on this subject. I am going to look at a few of these ideas, and then I am going to offer a couple of suggestions of my own.

Altitude is most people's first thought, and with reason. 2,000 meter elevations are common in Kalenjin country, and leading a vigorous outdoor life in the thin air at such altitudes has been shown to help create the high aerobic capacity that is vital to distance running success. Every athletics fan has heard stories of runners' childhoods in these highlands spent covering mile upon mile chasing cattle or - to cite the contemporary chestnut - jogging back and forth to school. The question is, why have these circumstances been so much more helpful to the Kalenjin than to other high-altitude dwellers? Where are the world-class athletes from Nepal, Peru and Lesotho? And what about elsewhere in Kenya? A dozen tribes around the country lead similar lives at comparable altitudes and have produced no notable runners.

How about diet? When I first wrote about Kalenjin runners 20 years ago, nutritional theories of the time ascribed benefits to the relatively high proportion of protein in their diet (from cow's milk and blood) compared with the diets of other African peoples. Actually, by Western standards,

Kalenjin protein intake was pretty low - lower still among mess-fed soldiers and school boys, from whose ranks most of the athletes come. These days, however, conventional dietary wisdom touts “complex carbohydrates,” and Kenyans’ starchy fare has been cited as a possible source of runners’ strength in several recent TV programs and articles in the consumer press. There is no question that the Kalenjin do live on a starchy diet. But then so do most Third World peoples. Starch, after all, is what subsistence farmers produce.

Material incentives are the time-honored explanation for ethnic disproportion in professional sports - the classic examples in my country being the succession of Irish, Italian, Black and Latino boxers from the wrong side of the tracks. By this line of thinking, the downtrodden groups’ inordinate success results from hordes of boys taking up boxing because they see it as an escape route from their desperate poverty. The same reasoning is often applied to running in Kenya today. The availability, first of U.S. college scholarships and now prize money and appearance fees, has had a demonstrable effect in boosting interest and participation throughout the country. But the Kalenjin were turning out world-class runners long before such rewards became available, and they continue to turn out three times as many as the rest of Kenya’s tribes combined, incentives or no incentives.

Clearly, none of these factors is a sufficient explanation for Kalenjin success, but neither can they be dismissed out of hand. Altitude by itself, for example, does not account for much. But when you combine 2,000 meter elevations with equatorial latitudes, you get an ideal climate for sustained outdoor activity - comfortably warm days, cool nights, low humidity. That, together with altitude’s aerobic benefits, begins to show why Kenya’s highlands as a whole are an ideal home for distance running. And it is worth pointing out that while about a quarter of Kenya’s population lives in comparatively sultry conditions at altitudes below 1,200 meters, every one of the country’s world class runners is a highlander.

Diet, too, has some significance, though I doubt if it has much to do with complex carbohydrates. Rather, it is that, like most Kenyans, and unlike many of the world’s poor, the Kalenjin have enough to eat. The simple fact

that Western Kenya has a lot of excellent farm land and a reliable food supply sets the country apart from many places that might otherwise be breeding grounds for runners.

That brings me back to poverty, which is also an important factor, but not quite in the clichéd sense of an oppressively grim environment that drives young men to train maniacally as they dream of escape. Rural western Kenya, where almost all the runners come from, is a far cry from a teeming slum or a grimy coal field. It is a land of beautiful green hills, not unlike Somerset or Wiltshire. And compared with other African countries, Kenya is fairly well supplied with basic necessities. Malnutrition is rare, infant mortality is among the lowest in Africa, life expectancy and literacy among the highest. More than 85% of all children attend at least a few years of primary school. And the country has been able to support the institutions - schools, uniformed services - that provide a fairly solid athletic infrastructure. So Kenya is at least prosperous enough to provide athletic opportunities.

Yet the people are poor, and unemployment is high. Kenya's per capita Gross Domestic Product is about \$1,200 a year, less than 1/20th the figure of a prosperous Western country. This means that to the average Kenyan, even the meager winnings brought in by most professional or semi-professional runners look pretty lavish. The prospect of earning, say, \$10,000 a year as a second- or third-rank road racer is a powerful incentive, and in view of the hundreds of Kenyans now making that kind of money, not an unrealistic ambition. Someone who thinks he has potential as a runner might quite reasonably devote a year or two to intensive training in the hope of attracting the attention of an agent and landing an invitation to a foreign road race or track meet.

Still, while there is something in each of these - altitude, diet, poverty - that helps explain the phenomenon of Kenyan running as a whole, none of them begins to account for the hugely disproportionate success of the Kalenjin. For that, we have to look more closely at circumstances unique to the tribe.

An obvious thought is that the Kalenjin might be endowed with some sort of collective genetic gift. This is touchy stuff, of course, and there is nothing like replicable scientific data to support the idea. But the prima

facie case for a genetic explanation makes some sense: the Kalenjin marry mainly among themselves; they have lived for centuries at altitudes of 2,000 meters or more; and, at least by tradition, they spend their days chasing up and down hills after livestock. So it is not unreasonable to suggest that over time some sort of genetic adaptation has taken place that has turned out to be helpful in competitive distance running.

This notion gets some flimsy support from the fact that linguistic data link the Kalenjin to tribes elsewhere in East Africa that have turned out a majority of their countries' world class runners: these groups, all of them historically pastoral as opposed to agricultural, include the Oromo in Ethiopia, the Iraqw and Barabaig in Tanzania and the Tutsi in Burundi. There is a temptation to imagine a race of lean, cattle-herding uebermenschen wandering up and down the Rift Valley.

What I find more intriguing, however, is the possibility that some of these peoples' customs might have functioned indirectly as genetic selection mechanisms favoring strong runners. I am thinking specifically of the practice of cattle theft - euphemistically known as cattle raiding. It was common to all these pastoral peoples, but in Kenya, at least, the Kalenjin were it is foremost practitioners. Of course they did not regard it as theft; they were merely repossessing cattle that were theirs by divine right and happened to have fallen into other hands. Never mind that those into whose hands the cattle had fallen often felt the same way. Anyway, Kalenjin raids often called for treks of more than 100 miles to capture livestock and drive them home before their former owners could catch up. The better a young man was at raiding - in large part, a function of his speed and endurance - the more cattle he accumulated. And since cattle were what a prospective husband needed to pay for a bride, the more a young man had, the more wives he could buy, and the more children he was likely to father. It is not hard to imagine that such a reproductive advantage might cause a significant shift in a group's genetic makeup over the course of a few centuries.

Much as I enjoy this sort of speculation, however, a different kind of data is needed to substantiate anything approaching a scientific genetic theory, and so far none exists. The most rigorous work to date has been done by the Swedish exercise physiologist Bengt Saltin, who took a team of researchers to western Kenya in 1990 and conducted elaborate treadmill tests and

muscle biopsies on several dozen Kenyan men, all of whom happened to be Kalenjin. He discovered unusual features in his subjects' muscle tissue and response to physical exertion, but he concluded that these were probably the result of the Kenyans' lifetime of vigorous activity at altitude.

One of his findings does suggest the possibility that the Kalenjin evince uncommon "trainability" - the capacity to increase aerobic efficiency with training - and research by the Canadian geneticist Claude Bouchard has shown this trait to be largely hereditary. Before drawing any firm conclusions about Kalenjin gifts, however, further studies would have to determine that trainability - or any other heritable trait - was truly instrumental in distance running success and that ordinary Kalenjin exhibit the trait to an unusual degree.

Without such evidence, notions of Kalenjin genetic superiority rest on anecdotal data - and as you might imagine, there is an abundance of that, some of it surprisingly persuasive. My favorite data of this sort are a dozen brief "case studies" I have collected of Kalenjin young men in their 20s who had never thought of themselves as runners at all until they wound up in circumstances that more or less obliged them to take up the sport. Most often this was because friends who were runners helped them to secure American track scholarships under false pretenses, and once on campus, the non-runners had to run in order to stay. In each case, what happened when they started training is quite remarkable. I will give one example.

Paul Rotich is the son of a prosperous Kalenjin farmer. The father wanted his son to go to college in the U.S., and in 1988, when Paul was 22, he was packed off to South Plains Junior College in Texas, where there were several other Kalenjin already enrolled, all of them on track scholarships. Rotich, however, went with no scholarship but with \$10,000 his father had managed to collect, a sum that should have been plenty to pay his tuition, room and board for two years. By the end of the first year, though, Paul found that he had spent \$8,000, and he realized he had to do something to get himself through the next year. Under the circumstances, the first thing that came to mind was a track scholarship. Trouble was, he had never run a race in his life, and he was fat - 85 kilos (13 and 1/2 stone) at a height of 1.73 meters (5 ft. 8 in.). He began training - running at night because he was embarrassed to be seen lumbering around the track. In the autumn he

managed to make the cross-country team, and by the end of the season he finished in the top 50 in the national junior college championships. But that was just the beginning. He landed a track scholarship - to nearby Lubbock Christian University - and over the next two years he earned "All-American" honors 10 times in cross country and various track events. When he went back to Kenya and told his cousin what he had done, the cousin replied, "So, it is true. If you can run, any Kalenjin can run."

It may be true, and if it is, it may be because of some as yet unspecified genetic endowment. But even if the Kalenjin are blessed with an innate physical gift, that does not account for their astonishing record in major championships. To succeed in those circumstances, an athlete must not only be able to run fast, but to run fastest when it matters most. And in this, the ability to rise to the occasion, to perform under pressure, the Kalenjin are supreme. I have tried to quantify this ability by evaluating performances in the most pressure-laden of all athletic events, the Olympic Games, and to compare Kalenjin performances with those of their rivals in the distance events. The aim was to rate performances not just in terms of medals or finishing places but in comparison to each athlete's pre-Olympic personal best. The base line, 0, was what I judged to be a respectable but undistinguished Olympic performance: not getting a medal, not reaching the final but coming close - within half a percent - of the pre-Olympic PB. In the 1500 meters, that means within about a second. I gave positive points for reaching the final, finishing in the top eight and for winning medals, and also for improving a personal best by various percentages, negative points for failing to finish and for falling short of a personal best by various percentages. Here is a summary of the scoring system:

PERFORMANCE UNDER PRESSURE – Point System

Base line: 0 = <0.5% slower than pre-Olympic PB, not finalist, not medalist.

Positive points:

- | | |
|---------------------------|-----------------------------------|
| +1 for reaching final | +1 for PR by <1 % |
| +2 for reaching top eight | +2 for PR by >1 % but <2 %...etc. |
| +3 for bronze | +1 additional for PR in final |

Kalenjin

+175 for 41 men in 59 appearances in 7 OG

+122 for 41 men in first OG appearances.

Avg. per man: +4.27

Avg. per man – first appearance: +2.98

Avg. per appearance +**2.97**

25 PBs; 15 PBs in finals

What accounts for this extraordinary difference? What is it that gives seemingly every Kalenjin runner the ability to summon a supreme effort when it matters most? We tend to think of such emotional strengths as acquired rather than inherited, though of course there's the possibility that cattle raiding or some other custom might have conferred a reproductive advantage upon, say, individuals who stood firm in crises, and that that faculty was somehow passed on. But I am inclined to believe this ability is the result of conditioning - that the tribe's austere warrior culture prepares young Kalenjin almost from birth not to quail under pressure.

The most obvious and probably the most significant set of customs in this regard is the series of escalating physical ordeals each child undergoes while growing up, culminating in circumcision, which marks initiation into adulthood. Circumcision is the central event in the life of every Kalenjin youth, anticipated for years with dread, and suffered with unblinking stoicism under the eyes of watchful elders, who are ready to brand a boy a coward for life if he so much as winces. It is not hard to see how this rite might help develop a capacity to put up with pain, which, of course, is vital in running long races.

But circumcision is far from unique to the Kalenjin. Dozens of societies in Kenya and hundreds elsewhere in Africa use more or less the same operation for more or less the same purpose; in many the rite has much the same significance and is accompanied by comparable community-wide commotion. For this reason, I was at first inclined to look beyond circumcision for whatever it was in Kalenjin culture that gave the runners their special strength. I changed my mind after going to a couple of circumcision ceremonies. I do not have time now to give a detailed account of what I saw, but when I compared it to what I was able to glean about other initiation rites from standard ethnographies and cross-cultural studies, I found what I think are significant differences.

They are not in kind, but in degree. In general, the Kalenjin rite and the long recovery period that follows are invested with greater secrecy and solemnity, and with greater importance as a means of inculcating standards of behavior. The operation itself is more physically arduous and the sanctions for failure more severe (flinching in fear or pain can result in what amounts to a kind of permanent internal banishment). Perhaps most important is the pervasive sense among adults, children and initiates that the traits of character tested in the ritual - courage, endurance, determination, restraint - are the ones the tribe values above all, and that to pass the test is to affirm those values, to fail it is to betray them. Thus as the initiates approach the predawn ceremony, they're quite conscious of bearing the weight not only of their own fears and hopes and those of their family and friends, but also those of the whole community, the tribe and centuries of Kalenjin tradition. A boy who stands up under that kind of pressure at 14 or 15 is unlikely at 25 to be anything but invigorated by the comparatively benign tensions accompanying an Olympic final. And if he was able as a boy to muster the strength to endure the excruciating pain of circumcision, what must he be able to do as a man when faced with nothing more than the aches and fatigue of the closing laps of a tough race.

Now, as a final note, since this is a gathering of British sports historians, I would like to bring up another possible reason for Kalenjin success that has to do with a British colonial law enforcement policy. I once had high hopes for this idea, but up to now I have not had much luck finding evidence to support it. I have talked about cattle raiding. In the early part of the century, it was endemic in Western Kenya, and the colonial administration went to some lengths to stamp it out. Because the Kalenjin were the most frequent offenders, they got more than their share of attention from the British in this regard. Raiders who were caught were jailed, and prisoners were sent out as laborers on public works projects; among these were the leveling and marking out of running tracks. Thus rustling and running seemed to be connected in an odd kind of symbiosis. This connection was confirmed in a letter I have from a former colonial officer - now dead - who recalled a campaign he conducted in one part of Kalenjin territory in the 1930s, promoting athletics as a surrogate for cattle raiding with a slogan that translates roughly as, "Show your valor in sports and games, not in war."

So it seemed that the Kalenjin fondness for raiding earned them an extra push from the colonial administration to take up racing instead. But try as I may, I haven't been able to find any evidence in colonial records that my correspondent's approach was ever applied throughout Kalenjin country. There are lots of references to Kalenjin cattle raiding, some with a detectable note of admiration, but none that mention the promotion of sport as a surrogate. I have looked through some of the literature on sport as a mechanism of social control, and there's certainly evidence that it was used this way among another Kenyan tribe, the Kikuyu, after the Mau Mau rebellion in the '50s. But I have found nothing about the Kalenjin. I have even looked at the encouragement of cricket as a surrogate for ritual warfare among Trobriand Islanders to see if I could in some way argue that this sort of thing was a common policy throughout the Empire. But that argument seemed a little thin. And in any event, if athletics was encouraged disproportionately among the Kalenjin in the '30s, the effects of the policy were long delayed: Kalenjin names do not start turning up with any frequency on the rolls of national champions until after World War II, when the tribe began to join the mainstream of rapidly Westernizing Kenya. Still, I am eager to pursue this idea further if anyone here can suggest sources that I may have overlooked on colonial law enforcement or the use of sport as a means of social control.