

Genetic analysis reveals patterns of migration of early Bantu speaking people

May 5 2017, by Bob Yirka



Bantu-speaking people travelling on a river. Credit: Luc-Henri Fage / Fells.fr

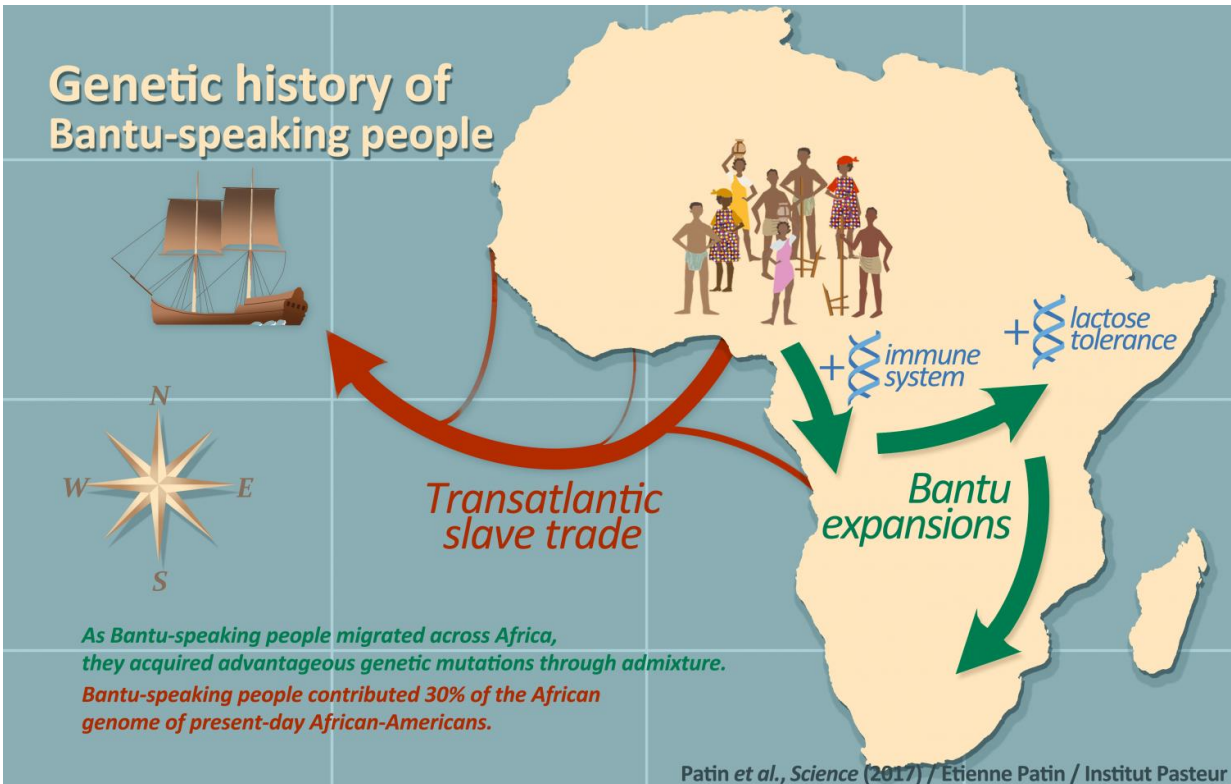
(Phys.org)—An international team of researchers has learned more about the migration history of early Bantu speaking people (BSP) in Africa by conducting a genetic analysis of over 2000 people living on the

continent today. In their paper published in the journal *Science*, the team describes their approach and what they learned about the BSP migration in Africa.

Prior research has shown that BSPs migrated from the western coast of central Africa to southern and eastern parts of the continent, but exactly when the [migration](#) occurred and the timing of a big split between groups of BSPs have been hotly debated—some suggest there was a split before the migration while others insist it came after. In this new effort, the [researchers](#) have used genetic analysis of individuals from across a wide swath of Africa and also from people living in North America to better understand what occurred. They note that due to the migration, approximately one-third of the people living today in sub-Saharan Africa are BSPs.

In all, the team collected samples from 2,055 people living in Africa. Then, they conducted a [genetic analysis](#) of the samples and entered what they found into a computer modeling software to show how BSP migration likely occurred. The researchers report that the software showed a migration moving south (through the rainforest), then farther south and eventually east.

The researchers note that as BSPs moved into the rainforest, they encountered and mixed with hunter-gatherer non-BSP people who had developed a genetic resistance to tropical diseases such as malaria approximately 800 years ago. Some BSPs also gained genes that allowed adults to digest milk. In exchange, the BSPs brought knowledge of agriculture with them, which forever changed the landscape in those parts of Africa.



As Bantu-speaking people migrated across Africa, they acquired advantageous genetic mutations through admixture. Credit: Patin et al., Science (2017) / Etienne Patin / Institut Pasteur

The researchers also obtained genetic information for approximately 5,200 African Americans and used it to investigate their African background. They report that they found a high degree of BSP ancestry, which was expected, as slave traders typically brought slaves to the Americas from the western coast of Africa. But the researchers report that they also found that their genomes on average were 16 percent non-BSP, suggesting that African Americans are much more genetically diverse than has been thought.



Bantu-speaking people travelling on a road. Credit: Luc-Henri Fage / Fells.fr

More information: Etienne Patin et al. Dispersals and genetic adaptation of Bantu-speaking populations in Africa and North America, *Science* (2017). [DOI: 10.1126/science.aal1988](https://doi.org/10.1126/science.aal1988)

Abstract

Bantu languages are spoken by about 310 million Africans, yet the genetic history of Bantu-speaking populations remains largely unexplored. We generated genomic data for 1318 individuals from 35 populations in western central Africa, where Bantu languages originated. We found that early Bantu speakers first moved southward, through the

equatorial rainforest, before spreading toward eastern and southern Africa. We also found that genetic adaptation of Bantu speakers was facilitated by admixture with local populations, particularly for the HLA and LCT loci. Finally, we identified a major contribution of western central African Bantu speakers to the ancestry of African Americans, whose genomes present no strong signals of natural selection. Together, these results highlight the contribution of Bantu-speaking peoples to the complex genetic history of Africans and African Americans.

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