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## CAN DNA TESTS PROVE A PERSON'S NATIONALITY?

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22/08/2018

CBSA DNA MIGRANTS NATIONALITY REFUGEES

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**In this post, Sarah Abel discusses recent reports of commercial DNA ancestry tests being used to investigate the origins of refugees.**

*A version of this post was published in Anthropology Today in December 2018. To access the article, click [here](#).*

In the past month, several news reports have emerged about the Canada Border Services Agency's (CBSA) use of commercial DNA ancestry tests to verify the nationality of detained migrants.

In one story described by [Vice News](#), after being convicted of several criminal offences in Canada, a refugee called Franklin Godwin was twice rejected for deportation by officials in his affirmed home state of Liberia, on the grounds that his documents were fraudulent. According to reporter Tamara Khandaker, the CBSA later contracted a linguistic analysis from a Swedish firm, Sprakab, which

suggested that Godwin was more likely Nigerian – a theory that the Agency has tried to verify using Godwin's social media networks and a commercial DNA test.

A few days later, [Agence France Presse](#) reported on the case of Ebrahim Toure, who arrived in Canada using a falsified French passport seven years ago and was scheduled for deportation. He was rejected by Guinean authorities, who claimed his birth certificate was a fake. After a linguistic analysis, a search of his Facebook friends, and interviews with known friends in Toronto, the CBSA began to suspect Toure was from the Gambia, and sought to confirm this using a DNA ancestry test.

In both cases, mitigating factors have been offered to explain why the men were turned away by officials in the countries they claimed as their home states. Godwin's lawyer has [pointed out](#) that Liberian authorities have in several other cases refused entry to deportees, particularly those with criminal backgrounds, possibly for political reasons. Meanwhile, Toure [explains the incertitude](#) around his own birthplace as a result of his own transient upbringing, which was spent between Guinea (where his father was born) and the Gambia (his mother is thought to have been born in Senegal).

In both cases, DNA tests seem to have been used by the CBSA as a final resource for verifying the "true" nationality of the men. But can a DNA test reveal a person's nationality? And what other problems does this pose?

## DNA testing and immigration

DNA testing has been used over the past thirty years by immigration officials in numerous countries (including Canada, the USA, Australia, China, and many Western European countries) as a means of testing migrants' claims for family reunification.

The tests are usually considered a last resort, to be used when the family has been unable to provide any other credible documentation to support their relationship. The analyses typically involve comparing DNA samples from the claimant and family members in question, to test the biological relationship between them. The reports tend to be processed by scientists at private or university laboratories, and the results can often be decisive for the claimant's case.

What's new about the examples cited above is the use of *commercial* DNA ancestry tests to try and pinpoint migrants' *nationalities*.

How is this being done? At one of Godwin's hearings last February, the CBSA stated that they had been in contact with two individuals (one of them from the UK) who had been genetically matched to Godwin by tests that they had taken with the company Family Tree DNA. Both individuals were of Nigerian origin, and both were estimated by the company's genetic relative-matching algorithm to be rather distantly related to Godwin: one was predicted to be a 2<sup>nd</sup> to 4<sup>th</sup> degree cousin, and the other a 3<sup>rd</sup> to 5<sup>th</sup> degree cousin.

DNA relative-matching features are therefore at least one tool used by the CBSA to establish migrants' nationality – although it is uncertain whether the Agency may also be using the genetic ancestry or “ethnicity” estimates to inform their conclusions.

## What DNA won't tell

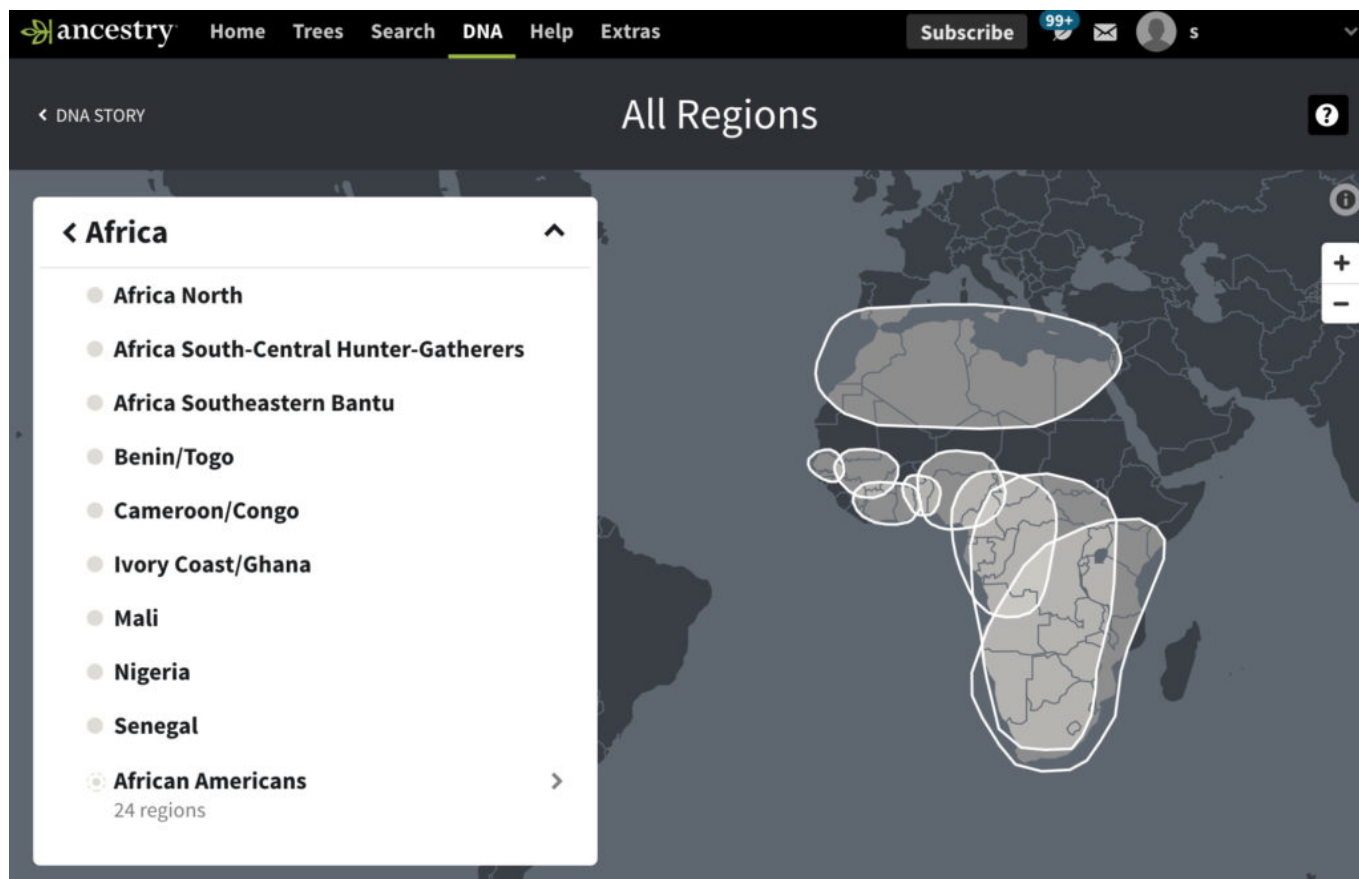
Many of the newspaper accounts of these cases have been quick to point out, correctly, that a person's nationality is not determined by their DNA.

Nationality is a legal and political mechanism, whereas DNA ancestry tests work by assessing individuals' genetic relatedness to various human populations around the world, and to other customers within the company database. Modern

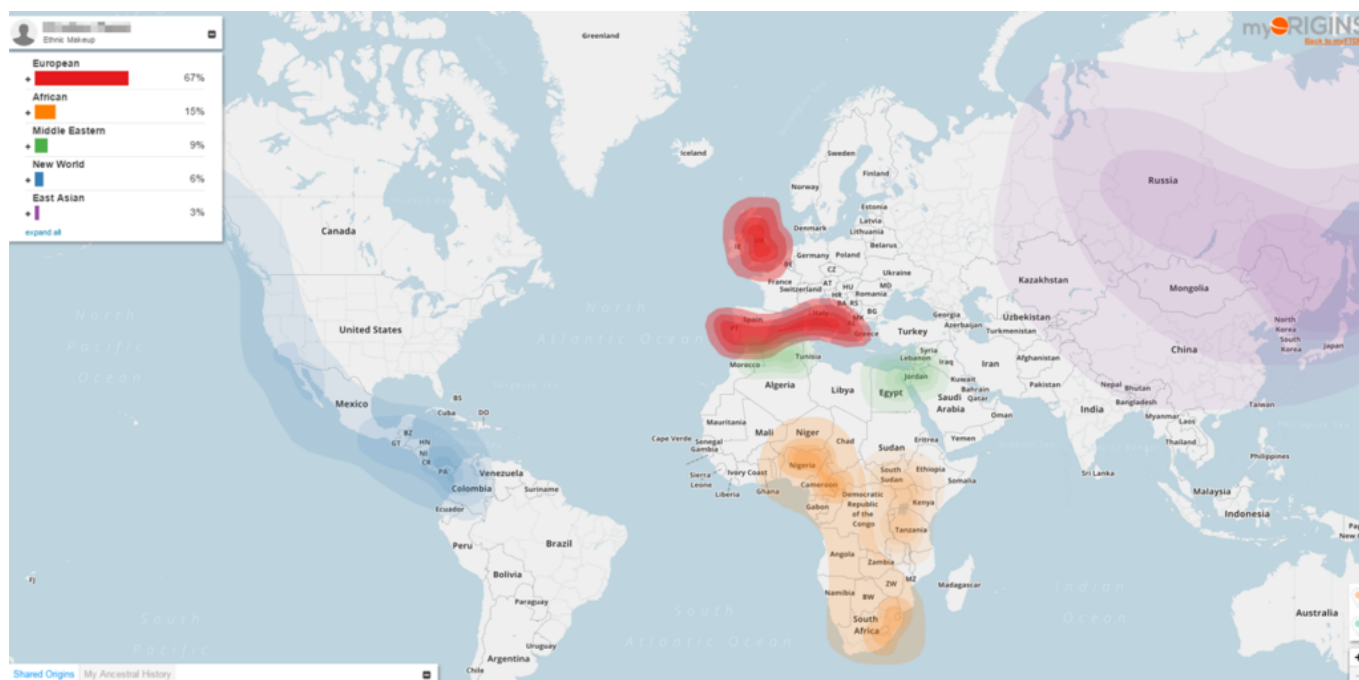
nation states tend to be multiethnic, comprising people of various origins, whereas DNA testing companies base their “ethnicity” estimates specifically on groups whose ancestors have not left their home region or country for several generations. Thus, as Subodh Bharati, Godwin’s lawyer, pointed out in an interview with *The Guardian*, “My DNA would say that I’m from India but I was born in Canada.”

As a matter of fact, if commercial genetic “ethnicity” tests were being used by immigration authorities to estimate migrants’ national origins, the results would probably not even point clearly to a single country, as Bharati suggests. Through my own research, I have taken a number of DNA ancestry tests, all of which have given varying reports on my genetic “ethnicity”. My nationality is British; three of my grandparents were British-born and one was Polish. But according to reports by four different leading companies, my “British” genetic ancestry component is estimated, respectively, as: **77.4%, 53%, 25.9%, and 0%.**

Most companies provide DNA reports that show a mix of ancestral components, in turn reflecting the processes of mixture and migrations that have been a constant throughout the entirety of human history. These reports, however, have important technical limitations – such as which populations are included in companies’ reference databases or featured in their results. For instance, Nigeria appears as a possible result in AncestryDNA’s genetic “ethnicity” test, but not Liberia, the Gambia or Guinea. Some other companies provide much less detailed estimates for sub-Saharan African ancestral populations; for instance, Family Tree DNA simply breaks its results down into “West Africa,” “East Central Africa,” and “South Central Africa.”



*AncestryDNA: list of African regions tested (source: author)*



*Family Tree DNA: map of population clusters (source: FTDNA Learning Center)*

However, the evidence presented at Godwin's hearing suggests that the CBSA does not necessarily focus on using genetic "ethnicity" results for determining

migrants' nationalities. They described contacting genetic "relatives" who were originally from Nigeria, the country they suspected Godwin of being from, based on a linguistic report (whose provider, incidentally, has received strong [criticisms](#) over its credentials and techniques for assessing the nationalities of asylum seekers).

Was the CBSA looking for people that knew Godwin and his family personally, who could verify his nationality? If this is the case, it is hard to see why DNA testing would provide better insights than looking at his social networks (which the CBSA also did) – especially since the two individuals in question were rather distant relatives. Or were they trying to infer his nationality based on the origins of people who are – albeit remotely – genetically related to him? If so, this reasoning is also flawed.

It is hardly news to point out that many families have relatives spread out over various countries – particularly when we take into account distant relations. My own DNA match lists include roughly as many Americans as they do Brits, but also Australians, Germans, and others who don't display their nationality. Once again, these results depend on the customer demographics of particular ancestry testing companies. But on a more basic note, *their* national or ethnic origins still prove nothing conclusive about *my* nationality.

## Legal and ethical issues

For many of us, it may seem hard to imagine not knowing one's nationality. In many of the world's societies, humans are born into complex bureaucratic systems. Early on in life, our names are officially recorded alongside those of our parents, and our citizenship is inferred either by parentage (*jus sanguinis*) or birthright (*jus soli*). By the time we are adults, nationality can seem almost to be second nature.

But of course, nationality is not natural, and there are many reasons why knowing one's nationality could be a complex affair. Some nations emerge or disappear during the course of a lifetime. Refugees fleeing war- or disaster-torn countries may not have access to official documentation to prove their citizenship, or the records may themselves be destroyed. Some people hold dual or even triple nationalities, while others exchange one nationality for another. Others – whether intentionally or unintentionally – slip between the cracks of bureaucracy, and end up stateless.

These are all fundamentally legal and political problems, which cannot be solved by “scientific” analyses, such as DNA testing or linguistic reports. And even in more orthodox examples where DNA tests are used in family reunification cases, biological criteria for relatedness may not coincide with socially defined family structures.

Take [the case](#) of a US citizen who applied for his four Ghanaian sons to be reunited with him in the United States, only to find that, according to his DNA results, only one of them was his biological child. Despite the claimant recognising all four children as his own, only the son with whom he could demonstrate a biological match was granted entry to the US.

The CBSA case also highlights the questionable ethics of taking DNA samples from migrants under what can reasonably be described as stressful and coercive conditions. To what extent can individuals fully consent to giving their DNA when the alternative is an indefinite period of detention? And what right do they have to control subsequent uses of their genetic information? Godwin's lawyer has affirmed that his client had not been allowed to see his DNA results, nor to contact his genetic matches, meaning that his personal account is currently in the full control of immigration officials.

What's more, how does this impact the ability of DNA test providers to protect the privacy of other users – for instance those individuals who were contacted by

the CBSA via their DNA profiles? While Family Tree DNA and AncestryDNA have confirmed that they do not work directly with border agencies, and that their priority is to protect their users' privacy, in practice there is nothing to prevent a person's DNA being taken without their consent and used for a range of unforeseen purposes (as the recent [Golden State Killer case](#) has highlighted).

The CBSA case is probably not one of a kind. It seems to be increasingly common for immigration officials in different countries to demand DNA tests from migrants, for reasons and uses that are not always clear or [coherent](#). Even when the motives seem both transparent and worthy – as in 23andMe's [recent pledge](#) to provide DNA testing kits to help reunite Central American migrant families separated at the US border – it is important to scrutinise the possible risks and abuses this may incur. Can migrants be guaranteed that their genetic data will not be stored permanently by the state, used against them in court, or sold to third parties? Going forward, experts and policy-makers should consider the appropriateness of collecting DNA for these purposes and, if DNA testing *is* implemented, what legal mechanisms can be put in place to safeguard the rights of vulnerable individuals, as well as regular users of commercial DNA ancestry testing services in these situations.

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