

Why DNA tests for Indigenous heritage mean different things in Australia and the US

Written by Elizabeth Watt, Research Fellow, Deakin University

Last week, Massachusetts Senator Elizabeth Warren released a [video](#) strongly suggesting two things: she is running for US president in 2020, and she has Native American ancestry.

The second claim was apparently confirmed by the results of a DNA test, which compared genetic data from Warren's whole genome with that from people of known [Central and South American](#) ancestry.

Warren has come [under fire](#) from both sides of US politics for releasing her genomic information. Many have questioned the veracity of the test. Others have said that even if Warren does have Native American ancestry, that [doesn't make her Native American](#).

Read more: [Two Native American geneticists interpret Elizabeth Warren's DNA test](#)

Things would likely have unfolded differently from a similar scenario in Australia. For starters, there isn't enough DNA data of Indigenous Australians to do the kind of genetic test that Warren did here. And Indigenous communities in Australia are generally more accepting of people who discover Indigenous heritage later in life, due to the Stolen Generations.

But Australia too is grappling with a bigger conversation about what DNA testing means when it comes to Indigenous identity and culture.

Indigenous recognition in the United States

In the United States, Indigenous-specific rights are reserved for members of the 573 federally recognised tribes. As Cherokee Nation's Secretary of State Chuck Hoskin junior [noted](#) in his response to Warren's announcement, admixture tests can't distinguish between North and

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South American ancestry, let alone between tribal groups.

Even if the resolution of these tests increased, the Cherokee and other tribes have made it clear they won't provide an avenue to membership. Most have minimum "blood quantum" requirements - [a complicated calculation of one's ancestry](#) determined by the number of documented ancestors in tribal censuses from the late 19th century.

Within this "tribal roll" system, Hoskin pointed out, DNA testing has only one, very specific use:

to determine lineage, such as paternity to an individual.

While blood quantum is controversial, many Native Americans defend them on the grounds that they provide a "[stand-in for cultural affiliation](#)". They argue that strict membership rules protect tribes against the increasing number of so-called "[ethnic frauds](#)"

" "[fake Indians](#)" "[New Age poseurs](#)" and "[wannabes](#)" identifying as Native American.

The genetic testing boom has added to this apparent "[onslaught](#)", which is one of the reasons Warren's use of DNA testing has angered so many tribal citizens.

As the enrolment clerk of the Mashantucket Pequot tribe [noted in 2006](#) :

It used to be "someone said my grandmother was an Indian". Now it's "my DNA says my grandmother was an Indian".

DNA testing for Indigenous ancestry in Australia

For those watching from Australia, this debate is at once familiar and strange.

Like the US, there are [growing numbers](#) of people who identify as Indigenous Australian. And, as in America, this has created debate about who “is” and “isn’t” Aboriginal.

Debates have been [particularly heated](#) in Tasmania, where the self-identifying Aboriginal population has risen from 671 people in the 1971 census to 23,000 in 2016. The [prospect](#) of using genetics to “prove” these new claims to Aboriginality had been raised at [various times](#) over the [past 15 years](#), by both the “new identifiers” and their detractors.

So far, however, DNA testing has been [dismissed](#) on technical grounds in Australia.

As we’ve [previously explained](#), there is a deficit of Indigenous autosomal samples in public and private databases. The term “autosomal” refers to genetic material not on the sex chromosomes and not in mitochondria (a separate type of DNA passed from mother to child).

Not even [AncestryDNA](#), which has amassed more than 10 million samples, has enough to offer a “[direct estimate of Aboriginal Australian ethnicity](#)”. This means Aboriginal ancestors can only be reliably detected through direct maternal or paternal lines (using [mitochondrial and Y-chromosome tests](#)).

The only two companies to offer “Aboriginality tests” – [DNA Tribes](#) and [GTDNA](#) – rely on short tandem repeat (STR) genetic testing. STR is [commonly used](#)

in criminal cases and for paternity testing.

Journalist Andrea Booth has [recently highlighted](#) the deep flaws in using STRs for ancestry purposes. She and her NITV colleague Rachael Hocking both took tests with DNA Tribes. While Booth, who is of East Asian and European ancestry, received results suggesting “Central Australian ancestry”, Hocking’s known Walpiri ancestry was “nowhere to be seen”.

Read more: [Explainer: can a DNA test reveal if you're an Indigenous Australian?](#)

Differences in community attitudes

But even if the future holds more accurate Indigenous ancestry testing, situations like Warren’s would likely play out very differently in Australia.

With the exception of the tense situation in Tasmania, Australians who have come to identify as Aboriginal in recent years have generally received a warm welcome from Indigenous communities relative to their American counterparts.

There is widespread sympathy for those affected by the Stolen Generations, who - with the help of government-funded services such as [Link Up](#) - have [reconnected with Indigenous family](#). Some lack documentary evidence of their genealogical links. But they may still gain recognition from one of the many diverse regional organisations (including Stolen Generations organisations) that can provide “Certificates of Aboriginality”.

Unlike Native American tribes, these organisations may not require applicants to have Aboriginal ancestors from their specific community or region, and none have “blood quantum” requirements, which are widely considered [offensive](#) in Australia.

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This approach means that the geographically broad ancestry information offered by genetic tests may carry greater meaning in Australia than in the US. It also means that the question of whether a person can “become” Aboriginal after discovering ancestry through a DNA test is more complicated.

Read more: [*A DNA test says you’ve got Indigenous Australian ancestry. Now what?*](#)

As Waanyi and Jaru man [Gregory Phillips points out](#), “cultural knowledge and experience of living Black” is an important criterion for determining Aboriginality. But he goes on to qualify that the Stolen Generations:

...through no fault of their own, might not be able to say they have cultural knowledge or experience of growing up Black, but if they can prove their Aboriginality through biological descent, then of course they can claim Aboriginality.

Hocking also expressed sympathy for those looking for evidence of Aboriginality when reflecting on her own “dodgy DNA results)”, stating:

I feel for our brothers and sisters who were part of the Stolen Generations, perhaps looking for some closure, only to be given results ... which say, ‘You are not black.’

Given these more inclusive attitudes and systems of recognition, it’s unlikely an Australian Elizabeth Warren would be summarily dismissed by the Indigenous community.

But it also means that, if an “Aboriginal DNA test” is developed, its impact on Indigenous

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identification could be greater than it has been on Native American tribes.

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