# Pre-Historic Migrations in India – Tracing the DNAs

## What is the issue?

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- A recent genetic research on pre-historic samples has revalidated the politically sensitive ‘Aryan Migration Theory’.
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- But additionally, the current paper has also stressed the irrevocable genetic inter-connectedness of all modern-day individuals.
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## What is the study about?

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- A recent study titled ‘The Genomic Formation of South and Central Asia’ has published its analysed on the contented Aryan migration theory.
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- While term “Aryan” has been consciously avoided, it has claimed that there was indeed some kind of migration into India in around the 2000 BCE.
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- “Ancient DNA” from 612 individuals in Central and South Asia were observed and a population influx into the region was claimed to be perceptible.
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- Significantly, the timing of this influx is said to perfectly coincide with the terminal phase of the “Indus Valley Civilisation” (IVC).
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- The study states that Steppe pastoralists around the “Volga and Don Rivers” in Russia moved towards India and came in contact with IVC populations.
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- Indications at multiple sites highlight that the migrants mixed with the southern population and produced a distinctive mixture of ancestry.
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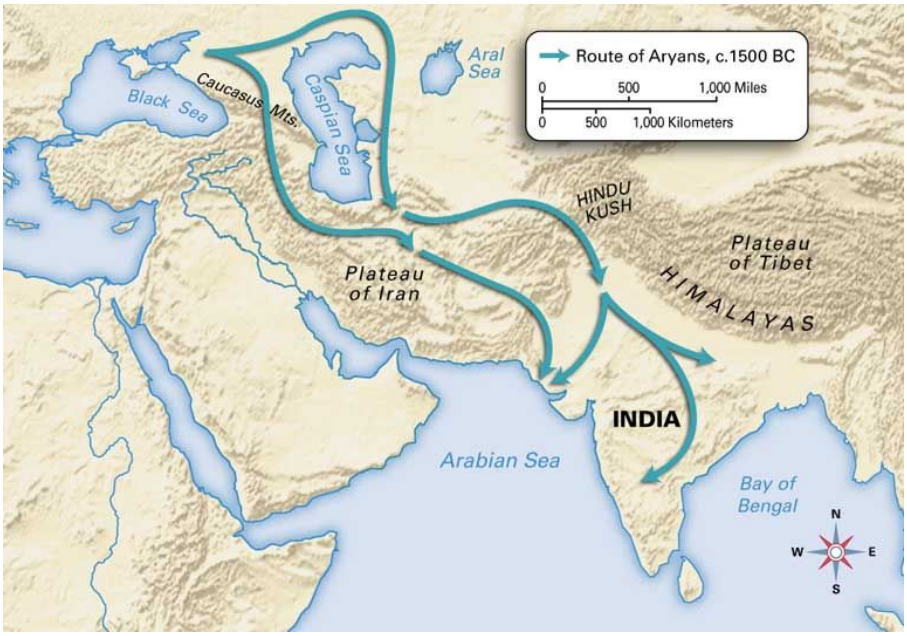


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## What were the various population mixes that were deciphered?

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- The research proceeds with the understanding that that present-day South Asians have descended from a mixture of two highly divergent populations, namely - Ancestral North Indians (ANI) and Ancestral South Indians (ASI).
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- With that viewpoint, it has worked to trace the complex genetic mixing that took place in various ways to create the ANI and ASI.
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- The study has claimed to have deciphered 3 separate population groups that intermixed to form ANI and ASI. They are:
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- **Ancient Ancestral South Indians (AASI) –** They were the South Indian hunter-gatherers. Ex: Onge (indigenous Andamanese people)
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- **Iranian Agriculturalists -** Pastoralists who lived near the ‘Zagros Mountains’ around 8000 BCE and had know the Indian subcontinent.
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- **Steppe Pastoralists -** Loosely referred to as the ‘Aryans’, these people are said to have inhabited the vast Central Asia grasslands.
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- The study has asserted that the initial IVC folks were a mix of the indigenous AASI population and the Iranian Agriculturalist population.
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- Later, the Steppe pastoralists (Central Asians) are said to have moved southwards and mixed with the IVC population.
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- Further, the people from IVC are said to have moved further south to merge with the indigenous AASI to form the Ancestral South Indians (ASI).
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- During the same time, the mixture between the Steppe people and the Indus Valley people is said to have create Ancestral North Indians (ANI).
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- Later, the ANI and ASI continued to mix with each other to create almost the entire ancestry of South Asian population (except some secluded groups).
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## What are the significant pointers?

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- **Castist Bias -** A strong connection had also been found between the Steppe pastoralists and the priestly castes (brahmins), and cultures of North India.
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- 10 out of 140 current Indian population groups that were studied were found to have a higher amount of Steppe ancestry than Indus Valley ancestry.
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- Signfincant among these were the ‘Brahmin-Tiwari’ and ‘Brahmin-UP’ groups and Bhumihars - all being the traditional custodians of early sanskritic texts.
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- More importantly, the general enrichment in Steppe ancestry was distinctive of the north Indian populations and was not found in south Indian groups.
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- **Conclusions -** It can be hence be stated that, the ANI are related to Europeans, central Asians, Near Easterners, and people of the Caucasus.
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- Contrarily, the ASI descend from populations that are not related to any present-day populations outside India.
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- While ANI and ASI were very distinct in their origins, they are said to have

mixed dramatically in India over the centuries.
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- Resultly, everyone in mainland India today is a mix, albeit in different proportions of ancestry with other populations.
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- Therefore, no Indian can claim to be genetically pure and any such conception is a fallacy driven by socio-political situations.
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## What is the essence of the research?

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- The current study is the 1st to have co-analysed ancient individuals and the present day individuals and is claimed to be path-breaking by the researchers.
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- Essentially, the study shows that there are no “pure” people anywhere — except perhaps in some very isolated and remote places like Andamans.
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- We are all mixed and almost all parts of the world have seen repeated mass migrations that have deeply impacted their demography.
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- Hence, the genetic studies should be liberating in a way because it should make us aware that we are all interconnected.
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## What are some of the criticism that rose against the study?

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- The study makes the assumption that there was a possible migration and then proceeds to establish the evidence gathers into this assumption.
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- While this is indeed one of the standard research methodologies, some have claimed that analysising migratory trends by this method is faulty.
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- Additioanlly, the study worked with genetic data from the pherepheral cites of the IVC as data from regions like Harappa are yet to be released.
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- But the DNA at sites like Harappan are likely to have formed the core of IVC, and not having analysed them is a big drawback.

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- The study is silent about the pre-IVC population in the Indus valley, and seems to be assuming a near absence of humans in the region before 3000 BCE.
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- Also, the influence of Mesolithic and Neolithic populations in the Indian sub-continent seems to the genetic pool hasn't been probed sufficiently.
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## How has DNA analysis techniques aided in revealing pre-history?

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- Improvements in the DNA anylitical techniques have greatly aided the decipherment of historic migrations not just in India but around the world.
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- Recently, it was established that Europe went through two major mass migrations that changed their demography.
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- Also, the Americas before the Europen arrival in the $15^{th}$ century is said have been populated by four distinct migrations form Asia.
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- On these lines, the findings about South Asia are just one part of the series of prehistory revelations that has been ushered in by DNA research.
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### Source: Indian Express

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