



On the Population History of South Asians and its Political Impact

**Particularly those groups from India, Pakistan, and Bangladesh*

Rohit Sureshanand

College Park Scholars – Science & Global Change Program

Computer Science

rsuresha@terpmail.umd.edu

College Park Scholars Academic Showcase, April 30, 2021



COLLEGE PARK
SCHOLARS

Introduction

South Asia is one of the most diverse places in the world, yet the examining the reasons for this diversity has always been controversial. My research topic focuses on understanding the underlying factors that led to the formation of South Asia's modern population, with the goal of answering: where do the ancestors of South Asians come from? And how are the different ethnic groups—within the region—related to one another?



This picture is meant to illustrate just some of the diversity that is present throughout South Asia. Though it is not always obvious for those who aren't well acquainted with the peoples of the region, depending on where you go in South Asia, the appearance of the average individual can drastically differ.

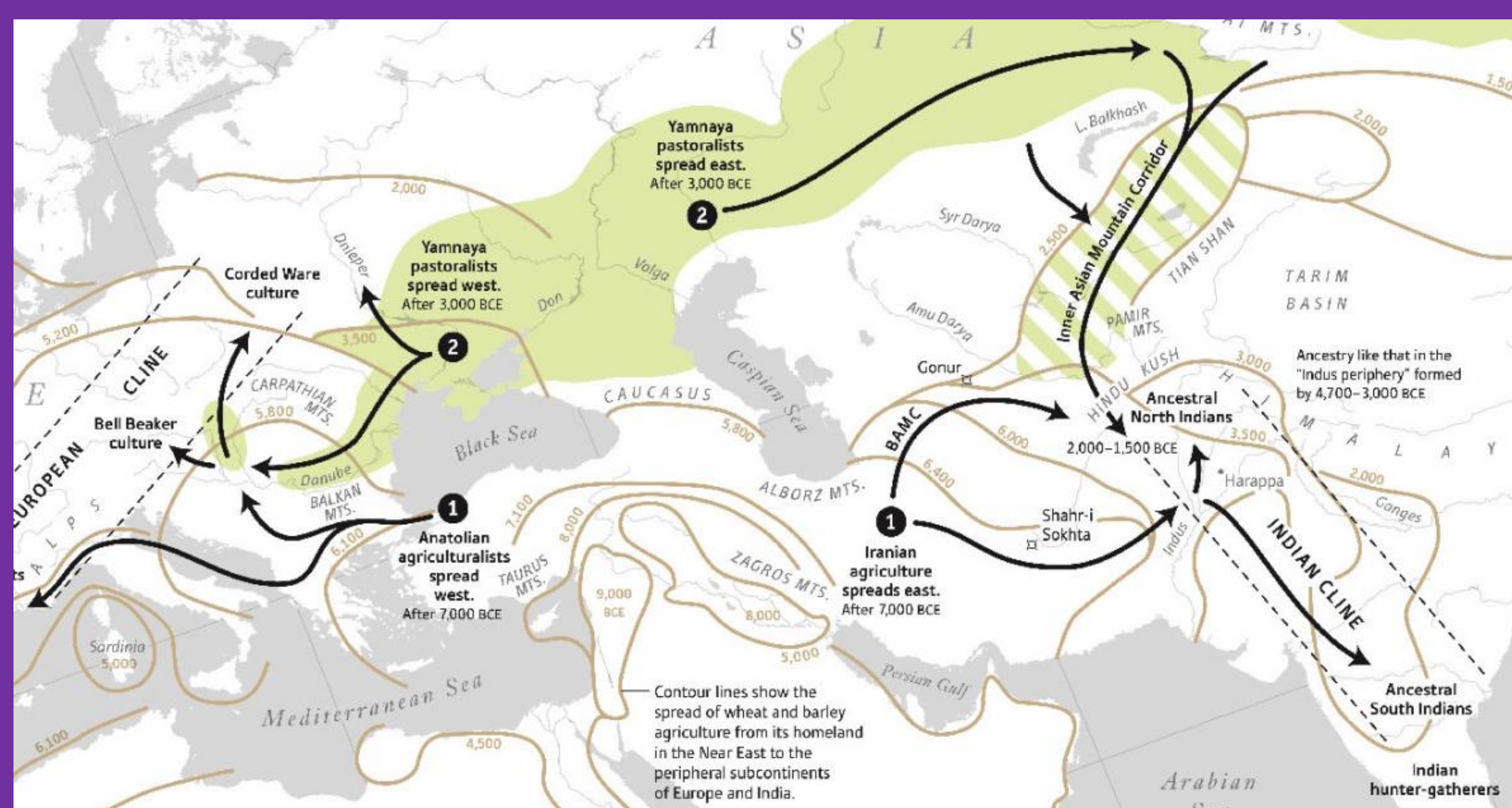
Methods:

I analyzed the genetic data of various ethnic groups within South Asia to see what is shared and not shared b/w groups and to what extent. Then, I compared these findings to archeological discoveries from Central Asia, Iran, and South Asia. This analysis enabled me to see how people within South Asia are related to each other as well as other groups in other parts of the world. In turn, we can establish potential migration events and patterns, when they occurred, and what changes, if any, that it could have led to within South Asia. This sort of comparison gave me a chance to see how the various groups are related to one another and to what extent. It also provided clues as to where the ancestors of today's South Asian's lived in the past, which is useful for establishing any migration patterns.

The main sources of my data were secondary sources. These were primarily from research journals and research papers that studied/compared genetic and archeological findings. I also did refer to some news articles for context, but often I went to their academic source they were citing.

Impact:

To put it short, the question I am trying to answer with my research has been political controversial in India, different political factions have attempted to give their own answers to it with the intent of riling up their voter bases. We see this with the Hindutva movement (whose supporters reject any scientific findings related to the topic) as well as with the Dravidian Movement, who claim that their ancestors founded the Indus Valley Civilization before it was destroyed by—who they view—as the ancestors of most modern-day North Indians.



This image shows the migration routes of two of the ancestral groups of nearly all modern-day Indians, one such group, who were related to the Iranian agriculturalists, migrated into the Indian subcontinent sometime after 7000 BCE, whereas another group known as the Yamnaya Pastoralists (also known as the Indo-Europeans) migrated into the subcontinent sometime around 2000-1500 BCE.

Discussion:

My research found that most Indians are a mix of three different groups: hunter-gatherers indigenous to South Asia, a group related to ancient Iranian Farmers, and the Indo-Aryans (descendants of the Indo-Europeans). Though the percentage of admixture from these groups varies by geographic location, all three components can be found in nearly all groups in South Asia. This key finding disproves claims of both the Hindutva movement (who say all Indians are indigenous, in terms of ancestral origin) and the Dravidian movement (who say South Indians are the descendants of the Indus people and distinct from North Indians).

Acknowledgments:

I would especially like to thank Dr. Lindemann for the guidance and support that she has given me, for my research project, this semester. Dr. Lindemann's guidance was pivotal in helping me determine what exactly needs to be done for this project, while making it engaging. Additionally, I would like to thank Dr. Holtz and Dr. Merck for their support and guidance in terms of the Practicum.

What I Gained:

From this project, I gained a comprehensive understanding of how population studies can help us trace the complex ancient ancestry and mixing of various groups. I learned that India's population history is very complex and represents a sort of "ancient melting pot." Applying my findings to the political scene in India, I also learned how partially mixing science with politics can lead to greatly misleading outcomes that can seem convincing to the average person. Through this, I was able to see how powerful such seemingly "scientific" ideas can be weaponized for partisan gains.



SCIENCE AND
GLOBAL CHANGE

