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Does the shape of countries shape their destiny?

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Does the shape of countries shape their destiny?

Abstract

Might the destiny of nations be controlled by the underlying shape of their geography? This is the subject of a recent study published in the Proceedings of the National Academy of Sciences. The authors – political scientists David Laitin, Joachim Moortgat and Amanda Robinson – calculated the area, size and longitude-to-latitude ratio of every country on Earth.

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Does the shape of countries shape their destiny?

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The length and width of countries might influence their cultural diversity ... or not. byJoeLodge

Might the destiny of nations be controlled by the underlying shape of their geography?

This is the subject of a recent study published in the Proceedings of the National Academy of Sciences. The authors – political scientists David Laitin, Joachim Moortgat and Amanda Robinson – calculated the area, size and longitude-to-latitude ratio of every country on Earth.

They then plotted results against the number of indigenous languages spoken. Their aim was to see whether the size and orientation of a country could explain their levels of cultural diversity.

Does shape matter?

The current research builds on an idea first hypothesised in 1997 by American scientist Jared Diamond in his popular science bestseller and TV show *Guns, Germs, and Steel*. Diamond posited that big events in human history – continental migrations, colonisation, uneven development, ecological catastrophe – were shaped by underlying geography.

One of Diamond's propositions was that continent shape and orientation mattered. Those continents stretching wider from east to west have less variation in climate and it easier for people to move around and for cultures to mix and blend.

Continents spanning a long distance north to south instead presented humans with huge variations in climate and landscape: deserts, jungles, ice caps and tundra wastelands. The



Jared Diamond jurvetson

result: cultural difference survives along a north-south transect more than east-to-west.

Laitin's team tested Diamond's continental axis theory.

Instead of continents, Laitin's team chose modern nation-states. Indigenous language was a proxy for cultural diversity.

After computing the north-south and east-west

axes of each country, they plotted the number of surviving Indigenous languages, looking for any discernible pattern.

The results confirmed Diamond's earlier hunch. The degree of north-south orientation is positively related to the persistence of linguistic diversity. Countries such as Chile, long and thin, had higher levels of linguistic diversity than wider, flatter states, such as Russia.

Such findings, the authors say, help explain how cultures expanded and conquered.

Shortcomings the study

There is much to be seduced by in this story. The trouble is that the whole exercise is undermined when assumptions and method are scrutinised.

Proving causality is near impossible. Laitin's team found a pattern of association between country orientation and language diversity – but no evidence to prove the former *caused* the latter.

There are also problems and limitations – that Laitin's team acknowledge – assuming that the present shape of countries is related to their ancient history.

As recently as 1900, British Geography textbooks showed vast swathes of Africa without



Douglas Fernandes (South America "addicted")

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How Africa appeared in A Class-Book of Modern Geography, 1900 Chris Gibson, "Australasia", in International Encyclopedia of Human Geography (Elsevier)

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Map of the world by French cartographer Nicolas de Fer in 1724 falco500

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A problem of geography

The clincher that relegates this study to the curiosity box rather than place it at the scholarly cutting edge is that Laitin's team forgot to read their geography textbooks. They succumb to an age-old fallacy – one academic geographers call environmental determinism.

It's a doctrine stretching from Charles Darwin back to Hippocrates and Aristotle: that human culture is determined by surrounding ecological conditions. The doctrine has been discredited by academic geographers since the 1920s.

While patterns of habitation are coarsely linked to climate, aridity and availability of soil nutrients (that's why the inland of Australia has always been more sparsely populated than the coast), environmental determinism invites false conclusions that culture or the mindset of individuals are *dictated* by climate or topography.

country boundaries. "Sudan" once referred to the bulk of sub-Saharan Africa, rather than the predominantly north-south orientated nation we now see in atlases. National borders have been re-drawn repeatedly. Using surviving indigenous languages as proxy for cultural diversity is also blunt.

In today's jumbled-up world of A380 flights, social media and transient workers, culture is far from geographically static.

It's also unrealistic to think that cultures can (or should) stay frozen in time.



Uluru nosha

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This once popular premise led early twentieth-century geographers to fanciful and hurtful theories about racial and cultural difference.

Infamously, climatologist Austin Miller argued that “the enervating monotonous climates of much of the tropical zone, together with the abundant and easily obtained food-supply” produced “a lazy and indolent people” more suitable to slavery than employment.

Even worse, German geographer Friedrich Ratzel’s theory of the organic state as biological organism provided an intellectual foundation for fascist imperialism.

Such ideas faded into obscurity in academic geography in the 1940s, in the wake of Nazism. Academic geographers now seek to study complex interactions between environmental, political, economic and cultural factors.

Heading in the wrong direction

Laitin and colleagues say nothing about “race”, yet the logic of environmental determinism engulfs their study.

They suggest that geography got in the way of cultural blending that could have prevented problems such as “low economic growth, high rates of generalised distrust of others, high likelihood of local violence”.

In contrast to reporting of their study, cultural diversity is, according to this skewed logic, a *bad* thing.

What is perhaps most frustrating about environmental determinism is its defeatism. If we trust Laitin’s results, it becomes all too easy to believe that no-one in particular is to blame when cultural diversity is undermined, and that we’re powerless to support it.

What counts far more than a country’s shape are its attitudes and policies towards cultural diversity, the treatment of indigenous peoples and how humans are embroiled within dynamic ecological change.

In a world faced with complex environmental challenges, we would be well served to spend less time thinking about the shape of countries, and more time thinking about the interactions between diverse human beings and environments at all scales.