

Growing Clues That India's Central Narmada Valley Was A Key Hub In The Human Story

02-22-2024 ~ In December 1982, a geologist digging in India's Central Narmada Valley found something he did not expect. Arun Sonakia, who at the time worked for the Geological Survey of India, unearthed a hominid fossil skullcap from the Pleistocene era.

The discovery sent shockwaves through the field of paleoanthropology and put South Asia on the map of human prehistory. Some experts concluded that the skull likely belonged to a member of a predecessor species of ours, [*Homo heidelbergensis*](#), or perhaps was a [hybrid](#) of homo species, while Sonakia himself suggested "[an affinity... to *Homo erectus*.](#)"

The specimen remains the oldest human fossil [found](#) in the South Asian subcontinent; while expert opinions vary, testing [seems to indicate](#) the fossil was between 250,000 and 150,000 years old. For several decades, it was the *only* ancient human fossil found in South Asia—despite abundant finds of tools and other relics.

But in more recent years, more than a dozen other fossil bones that have been discovered have shined a light on the Central Narmada Valley as a [potential](#) hotbed of human evolutionary activity. Paleoanthropologist Anek R. Sankhyan and his team discovered new fossils [between 1983 and 1992](#), followed by further finds between 2005 and 2010.

Sankhyan shared during an interview that only the Central Narmada Valley has so far yielded human fossils from the Pleistocene period in South Asia. The valley, he says, was a key stop along the migration route from Africa to Southeast Asia for *Homo erectus*. [*Homo erectus*](#) was an archaic human ancestor that [lived](#) between about 1.9 million and 100,000 years ago and adapted to regions from Eastern Africa to China to Southeast Asia. It has not been established whether *Homo erectus* comprises one species spread wide geographically or multiple species involving local variations.

Sankhyan connects the Narmada Valley with some of the more sophisticated [Acheulean](#) stone tool cultures that emerged with *Homo erectus* in Europe and Africa. [Acheulean tools](#) are characterized by multiuse-hand axes used for roles ranging from woodcutting to butchering animals.

In the Central Narmada Valley, [Sankhyan's evidence](#) from his paper—published in *Advances in Anthropology* in 2020—on the subject seems to show at least two distinct types of hominins represented: the large “robust” line uncovered through Sonakia’s skullcap discovery, and an evolving “short and stocky” hominin line from 150,000 to 40,000 years ago discovered by Sankhyan and his team.

Sankhyan says that the traits of the skullcap found by Sonakia vary among *Homo erectus*, *Homo sapiens*, and have features that are unique, making identifying it “[confusing](#).” He concluded that the skullcap is also representative of *heidelbergensis*, and perhaps might be a *heidelbergensis*-Neanderthal hybrid. A skull with so many traits is a clue that this region may indeed have been a multispecies melting pot that puts our contemporary sense of human differences to shame.

Heidelbergensis was a species that was the ancestor of both Neanderthals and *Homo sapiens*, and [first appeared](#) 700,000 years ago, disappearing 200,000 years ago. It was an intermediate species between *Homo erectus* and modern human beings and Neandertals. *Heidelbergensis* was likely the first human species [to control fire and hunt large game animals](#). The hominid fossil found by Sonakia likely used tools like an Acheulian pick axe and was found near a crushed molar tooth of a [Stegodon](#), a large, extinct relative of today’s elephants. Sankhyan says that the ecology of the valley during the Lower Paleolithic was that of a warm woodland forest with megafauna like the *Stegodon*, during his interview.

The “short and stocky” line has been given its own nomenclature: *Homo narmadensis* by Sankhyan. This species was widespread in the Central Narmada Valley during the “Middle to Upper Paleolithic [era],” and hunted smaller game animals in a “broken forest ecology.” *Narmadensis* was discovered near significant numbers of [Mode 3 Acheulean tools](#), which are more sophisticated than the Mode 2 tools attributed to the *heidelbergensis* line.

Paleoanthropologist Sankhyan speculates that the “short and stocky” hominin line was the “likely precursor to the ‘short-bodied’ ancient populations of India,

including the Andaman pygmy.” Interestingly, he believes that the so-called “hobbit” of Indonesia, [*Homo floresiensis*](#), also descended from this line. *Homo floresiensis* was a little more than three-feet tall and lived between 100,000 and 50,000 years ago.

While Sankhyan says that the government organization, Anthropological Survey of India, has not conducted further excavations since 2010, according to him, there have been individuals from other departments who “tried sporadic trial digging,” but those digs have not yielded any significant results.

As research continues in this area, we’re likely to get even more insight into the varied hominin types who lived in the Central Narmada Valley in the last hundreds of thousands of years and how they interacted with one another. Regardless, the establishment of South Asia as a center of human evolutionary activity is likely to have consequences for how the region, and India in particular, understands itself and its prehistory and history.

For decades, nationalists, including representatives of today’s far-right Hindu nationalists in India, have promoted the idea that South Asians and Indo-Europeans as a whole [originated from within India](#). Though this theory is [false](#) and unnuanced, the evolutionary history of hominins in the Central Narmada Valley offers new ground for Indian nationalists to make the argument that hominins or primates had their roots in India.

But if there are dangers in linking contemporary India with the prehistory of the subcontinent and its place in the world, there are also opportunities. As with India, fossil evidence in [South Africa](#), [Kenya](#), [Tanzania](#), [Georgia](#), and [China](#) indicates that these places were repeatedly home to prehistoric population centers—they all have equal claim to being part of a global and gradual humanization process.

As a result, a nonaligned or regionally connected Global South has a powerful new origin story and better pathways for connections, rooted in evidence outside of the historical narratives imposed on them by the West. Further research will establish what science shows, but it will be politics, geopolitics, and the direction chosen by the world’s people that will contextualize the evidence within the human story.

By Saurav Sarkar

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Source: Globetrotter

The Great 'Japa' Movement: A Blessing In Disguise, Not A Cry For Help



Adekunle Olajide

02-21-2024 ~ Introduction

Many Nigerians have been leaving the country in search of better opportunities in other countries, a trend that is widely known as the 'Japa Syndrome'. This has caused a lot of controversy and sparked a lot of debate on the popular social media platform, Twitter (now X), where many users have forecasted a bleak future for the economic situation of Nigeria owing to this mass migration.

The recent change of government, with President Bola Ahmed becoming the new leader, is regarded by majority of the youth as the final reason that made them

embrace the 'Japa' movement – a buzz word that has taken a rightful place in Nigeria's urban lexicon.

However, those pressing the panic button may not be seeing the bigger picture. Only a few people have looked at the situation in-depth, like a Chess Master who evaluates all the possible scenarios before making his next move. Calling the current trend, a disaster for the Nigerian economy, is like a beginner chess player who only sees the board from one angle.

Have Nigerians actually taken a moment to consider that, beyond the mere surface, this whole 'Japa' movement might actually not be a cry for help situation, but rather a blessing in disguise?

If we can just take a step back and distance ourselves from the noise on social media or opinions of internet trolls and consider the long-term prospects of the 'Japa' movement. Perhaps, amidst the buzz, we will start to see the movement as the silver lining and driving force for our socio-economic and political resurgence and development.

Nothing is New under the Sun – Not even the Great 'Japa' Movement.

The concept of movement is one that has been ingrained in the very fabric of our humanity, a universal trait inherent in our nature that cannot be blotted out. It is often stated that 'movement is merely a construct of globalization' and that by nature, humans are peripatetic beings—beings with an instinctual desire to move from one place to another in search of opportunities or desires, be they material or incorporeal desideratum. This stands as both an anthropological standpoint and an undeniable fact!

Against this backdrop, it suffices to say that there, indeed, nothing new under the sun. The mass exodus of Nigerians, or the Great 'Japa' Movement, as I comically dubbed it, is not a novel phenomenon but rather a contemporary echo of historical migration patterns. The only distinction lies in the amplified buzz created by social media, turning it into a sensationalized narrative, as if it is the next big thing since sliced bread.

From a historical perspective, the genesis of the 'Japa' movement can be traced to the 1980s, a period of military transitions, socio-economic breakdowns, and political maladministration in Nigeria. Following that, the movement took form during the urbanization wave in the country, a period when the ambitious youths

migrated from their villages and hometowns to the cities, notably Lagos, Abuja, or Port-Harcourt, seeking improved working conditions and greener pastures. This trend, which was once overlooked despite its impact on agricultural productivity, has taken on a whole new level, and now we want to kick against it? So Nigerian!

Let's also not forget the darker times, when Nigerians and other Africans, in their quest to find better pastures, undertook life-threatening sojourns and illegal terrains through the great Sahara and crossing the Mediterranean in search of a better life. This movement is neither new nor did it started last years; it started way back!

Legitimacy and Legal Standpoint on Migration.

Moving on from historical records to the contemporary legal landscape, there are clearly established legal policies that fully legitimizes migration.

To begin, *Section 41* of the 1999 Constitution of the Federal Republic of Nigeria affirms the inalienable right of citizens to move in and out of their homeland. *Articles 12 (2)* of the African Charter on Human and People's Rights (ACHPR) and *Section 13(2)* of the Universal Declaration of Human Rights (UDHR) further emphasize the universal right of citizens to leave any country, including their own, and to return to their homeland.

These cogent legal perspectives underscore the legitimacy of citizens to freely move in and out of their home country and the right of people to seek employment and better opportunities wherever they may find them.

Nigeria Deserve your Gratitude.

It is quite disheartening to see Nigerians, both at home and abroad, continually tarnishing the image of the country, describing it as inhospitable, unfavorable and a place where the dreams and aspirations of Nigerians die.

This negative narrative, which is primarily aimed at triggering angst and hatred towards the Nigerian government, is often fueled by half-truths, hyperbolic comments, and warped information. This category of individuals can only be viewed as uninformed, tunnel-visioned citizens with an entitlement mentality.

These entitled critics are not aware of the historical realities of the present world powers, most especially the United Kingdom (UK) that they so much endear as the land of the golden fleece. They are not aware that, at one point in time, countries like the UK emigrated from their country and went about colonizing,

conquering, and pillaging the resources of other nations, and bringing it back into the coffers of their homeland. Most of these world powers of today once emigrated to other parts of the world before becoming influential global forces.

These set of uninformed countrymen and women have forgotten that before they left the country to make exploits, Nigeria was their training ground that laid the foundation for them to migrate out of the country. Most of the graduate professionals that are now thriving in diaspora did receive their first-degree education in Nigerian tertiary institutions before leaving. Can they compare the cost of acquiring a competitive degree in Nigeria to anywhere else in the world?

Most people failed to notice that the Nigeria public tertiary education is highly subsidized. Even in the early days, the federal government even sponsored the education of Nigerians studying overseas - our present and past university professors who got to study abroad on federal government scholarships can candidly attest being a beneficiary to the Nigerian government's beneficiary.

At present, Nigeria's public university students pay a minimal yearly tuition fee of about \$25 to \$75 yearly, for a period of 4 to 5 years to earn a competitive degree - an insignificant figure compared to what is obtainable in other parts of the world. Contrastingly, countries like the UK and USA require students to take on substantial student loans in order to finance their tertiary education.

Looking at the net migration figures, the population of Nigerians in the UK is still a fractional and insignificant figure compared to countries like India, Ukraine, Pakistan, and Poland. Latest figures published by the UK authorities showed that Nigeria is ranked in 7th place in the net migration index.

Considering the cost of living abroad, as well as the tax burden and educational expenses abroad, it is evident that Nigeria has provided a facilitating platform for success. Nigerians and Africans, when abroad, often excel and achieve extraordinary feats, owing their success to the foundation laid in Nigeria.

So, in the grand scheme of things, the favourable immigration policies, the diplomatic ties Nigeria has built with several countries of the world, the education qualification, work experience, information, and exposure that Nigerians are a beneficiary of, were all made possible by the foundation and groundwork that Nigeria laid over the years.

Now, this article piece is not pontificating that the situation of Nigeria is thriving or that the country economy is all fine and dandy. No! It only aims to set the records straight and establish that the narrative has been brandished and misrepresented by not only the media to sell their stories, but also by some Nigerians in the diaspora who only seek to make worse of the current situation.

Yes, the country is not working as it should, but it is essential to establish that the situation is not as dire as it has been painted to be.

The Upsides to the Great 'Japa' movement No one seem to be Talking About.

In July 2023, Peter Gregory Obi, the presidential candidate for the Labour Party and former governor of Anambra state, expressed his endorsement of the movement stating how it will impact the nation's economy. His core belief is well underscored in his statement that "our brain drain today will be our brain gain tomorrow".

He made this statement to corroborate the sentiments of tech mogul, Bill Gates, who during an interactive session with innovators stated that the 'Japa' movement was good and healthy for Nigeria as their knowledge, experience and resources will be critical in building the New Nigeria. This is currently what is obtained in China, India, Ireland, and other developing countries. The assertions from these two prominent figures are a good signal of the potential fortune that the 'Japa' movement could bring.

So, while we wait for those fortunes, let us explore the often-overlooked upsides of this movement and discover how it might eventually work to the benefit of our beloved homeland.

I. Global Opportunities for our Professional Talents

The movement will afford our professional talents the opportunity to access globally recognized and financially rewarding work opportunities that are not readily available in the Nigeria labour market.

Cutting-edge fields such as Robotics, Stem-cell research, Blockchain Technology, Artificial Intelligence, Bio-medical engineering, Astrophysics and Space technology can become an avenue for them to not only arm themselves with great experience and work pay, but also reinforce the remarkable brilliance and drive of the Nigerian people. These guys could emerge as pioneers in these global fields and ultimately channeling their expertise towards national development.

II. Foreign Remittances and Economic Growth

According to UK immigration authorities, over \$17.6 billion in foreign remittances were sent to Nigerians by our brothers and sisters living in the diaspora in 2021 alone. The foreign remittance is sure to significantly benefit the Nigerian governments and contribute to the nation's GDP as this monies will go into various areas of the economy in terms of expenditure, savings, business ventures and capital investment, all adding to the growth and development of the nation's economy.

III. Job Opportunities and Unemployment Reduction

The departure of Nigerian professionals who experienced career boredom, exhaustion, and the inability to move ahead in their career, will create a void that will demand filling. This vacuum will automatically create job opportunities to suitably qualified applicants who are unemployed or underemployed and by long-term implications, help reduce the unemployment rate and the unemployment gap in the nation's labour market.

IV. Improved Working Conditions and Competitive Markets

With this mad rush to emigrate as well as the knowledge and exposure of how foreign companies treat their employees, big businesses and corporations are now being forced to meet global standards and benchmarks by improving their working conditions and salary structures. This paradigm shift will help in improving the welfare of working professionals in Nigeria.

In furtherance to that, the movement has heralded and ushered a paradigm shift in the hiring requirements of employees. Now, hiring parameters will emphasize on work ethic and skillset over traditional academic credentials. Job applicants, regardless of their degree classification, can well be considered for roles that were previously restricted to only those with higher academic grades.

V. Government Inducement for Change

The 'Japa' trend, which is majorly an indictment of the Nigerian failing economy atmosphere, will act as a catalyst for government to act and do the needful. The fear of losing the nation's best brains and talents prompts the government to take essential steps to address the root causes and ensure the retention of our valuable human resources.

The Japa Movement Could Be Our Silver Lining.

Nigerians are known for their hard work, productivity, industry, professionalism,

and a drive to succeed – attributes that contribute to enhancing Nigeria’s global image and brand. While the short-term effects of the ‘Japa’ movement may create turbulence in sectors like health, technology, academia, and science; the long-term potential it hold can very well be the turning point the Nigerian economy desperately needs.

It is essential to note that reportedly, 91% of Nigerians living in the diaspora remain connected to the homeland. Majority of them have undertaken various charitable and non-charitable initiatives to improve the socio-economic atmosphere in Nigeria. These endeavors include business ventures, capital investment, and socio-humanitarian efforts. Though they appear physically distant from the country, their hearts and love for Nigeria remain strong.

It is important that we remember the historical precedents of the ‘*Great China Movement*’ and the ‘*Great India Movement*’. Both countries experienced and are still experiencing mass exodus of their citizens, but today, they emerged as great economies, with their citizens in the diaspora playing a crucial role in their development. The implication is clear – the Nigerians in diaspora will be instrumental in driving progress and advancements in various fields and sectors of government.

Let’s also face this undebatable fact — Nigerians in diaspora harbour an innate longing to return home. The unique freedom and carefree lifestyle offered in Nigeria cannot be obtained anywhere else in the world. In fact, some Nigerians who are now abroad actually regret the move. This is as a result of the unanticipated challenges and gruelling experience that they faced when they got there. Those who couldn’t secure their desired job roles were forced to settle for menial, and odd jobs just to meet up with their living expenses.

Others are in great distress due to the cultural shock they are forced to grapple with. The heartbreaking story of Sylvia Obianuju Chikwendu on TikTok, who tearfully recounted her struggles with the loneliness she endures since she relocated to Canada is one that resonate deeply in our hearts.

Furthermore, the burden of remitting a sizable portion of their hard-earned income to foreign tax authorities, due to higher tax that is obtained abroad is something that does not sit well with many Nigerians. Aside that, the very fact that there exists only a tiny window of opportunity for Nigerians in diaspora to

showcase their entrepreneurial acumen and engage in business ventures, will further drive their desire to return.

Final Thoughts: There's No Place Like Home.

I believe it was Oliver Wendell Holmes Snr. who said that *'Where we love is home - home that our feet may leave, but not our hearts'*

Indeed, there is no place like home. Majority of Nigerians living abroad have indicated their readiness to come back to Nigeria after making their exploits overseas and they plan on coming back with a wealth of experience and a determination to contribute significantly to national development.

Their involvement and commitment to the betterment of Nigeria is evident in their influence during the #EndSARS Protest in 2020 and also, their mobilization efforts during the 2023 general elections.

To this end, the burden rests on the government's shoulder to create a welcoming environment to accelerate their return. Achieving this will entail implementing favorable laws and policies to attract foreign direct investment and increasing the ease and convenience of conducting businesses in the country. Improving the nation's ease of doing business will be pivotal in scaling enterprises and will ultimately attract creative minds and top talents to return and contribute their quota to nation's development.

One undeniable truth is that no matter how far one travels, there is truly no place like home. Even as our people physically move, their hearts remain tethered to the homeland. So, all those aspiring to 'Japa', we wish them nothing but the very best in their exploits. We hope they become great ambassadors of the beloved homeland and when the time is right, we do hope that they *'Jakpada'* (meaning to *'return home'*, as said in Yoruba). We hope to see them bring back their bounties and reestablishing their roots towards the continued growth and development of the motherland!

To close, let the resonant words of Peter Gregory Obi resonate deeply in our hearts: *"Nigeria will grow and develop on all fronts when we build the new Nigeria that prioritizes investment in education, health, and support for small businesses, guarantees respect for the rule of law, security of lives and properties, and unity of the nation...then our diasporan Nigerians around the world will return home with their global training, skills, and resources, to*

immeasurably contribute to building a New and better Nigeria.

We will not give up on our dreams for the New Nigeria.”

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The Evolution Of The Human Pair Bond



Brenna R. Hassett -
Source: en.wikipedia.org

02-21-2024 ~ Our species stands out from the animal kingdom in many ways. Some of them are obvious: we are big-brained primates who use tools and language, a social species with symbols, culture, and art. These are all artifacts of our evolution, the process by which our ancestors found adaptations that allowed them to succeed in a natural world that is often red in tooth and claw. Often, however, we think of evolution as affecting our physical bodies—changing the shape of our hominin ancestors so they could walk upright, or grow bigger brains. But evolution has other ways to act on a species, particularly in clever, social species like ours. It can shape the way we socialize and bond, the way we pass on learning and care, and even whom we love. This is why we find that one of the most remarkable adaptations our species has ever made lies in our very, very unlikely mating system: monogamy.

Monogamy is a strange word and an even stranger concept. The way we use it in our societies today to imply two people romantically linked for life is a far cry from what a scientist who actually observes primates like us would call it. Monogamy, simply put, is pair-bonding between two animals. Often it is pair-bonding with an eye towards reproduction, but it can also include animals that can't reproduce together who form a pair-bonded social unit anyway. Perhaps the most famous example, though [certainly not the only one](#), might be [Roy and Silo](#), two chinstrap penguins from New York's Central Park Zoo who formed a pair bond and even raised a chick together. There are other critical differences between what a scientist would define as a pair bond and what we commonly

understand monogamy to be.

While humans tend to define monogamy as a once-in-a-lifetime pairing, with rituals and cultural rules that reinforce the idea of a lifetime bond, even the most pair-bonded of animals rarely are pair-bonded for life. Perhaps the most extreme animal monogamists on the planet are the far-flying seabirds albatrosses and petrels (all from the family *Procellariiformes*); almost every single pair is mated for life. However, even in these pairs, factors can intervene to disrupt the pair bond. Beyond simply losing one member of the pair, even allegedly mated-for-life albatrosses [have cases of 'extra-pair paternity'](#)—almost 10 percent of chicks surveyed in one sample had a male parent who was not their female parent's partner.

Humans, even those with strong cultural proscriptions against adultery, have very similar rates of extra-pair paternity—about 10 percent. While some cultures, particularly those that do not allow a great deal of female agency in choosing a partner, have slightly higher rates than others, this figure seems to be broadly the same across our species. While genetic monogamy—where two individuals breed exclusively with each other—may be elusive, even in the allegedly monogamous sea birds, social monogamy is not. Social monogamy is the type of pair bonding where the partners fulfill all the social roles needed in a pair bond without necessarily producing any genetic offspring—like Roy and Silo, tending a chick that was not their own. This suggests that it is *social* monogamy that is the most important part of pair bonding for many species—including our own.

Why would social monogamy benefit a species? It must offer some sort of advantage to our species, or we would not have adopted it—and we have indeed adopted it. Despite our very human flair for variety and adaptation, [most societies around the world set a pair-bonded couple at the heart of how their members reproduce](#). Of course, there are examples of polygamy—marriage of one male to multiple females—and even polygyny—one female to many males in our wide array of cultural practices, but the vast majority of our fellow *Homo sapiens* will have social expectations of forming a monogamous pair bond.

So why have we evolved to have these bonds? It is not at all automatic that pair-bonds would be of adaptive value. In species that have evolved to sexually reproduce, the distribution of risk and reward for breeding behavior depends on how much each partner will need to invest in reproduction in order to produce a

successful offspring. For the partner that makes the small gamete (sperm), investment costs are lower from the get-go, meaning strategies that maximize opportunities for reproduction. In fact, pair bonding is an incredibly rare phenomenon in the animal kingdom. Outside of birds, who are uncommonly fond of the state—90 percent of bird species create pair bonds—only 5 percent of animal species settle for ‘the one’ and form pair bonds. About 15 percent of primates, however, opt for pair-bonding.

Here we can start to unravel part of the mystery of the human pair bond, by examining what our other clever, social primate relatives use pair bonding for. The evolution of monogamy, or pair-bonding, has been [a topic of major debates in anthropology and primatology](#) . Most of the primate species that form pair bonds are actually quite distant from our species evolutionarily—the smaller monkey species like the marmosets, titi monkeys, and owl monkeys. Many of the original investigations of primate monogamy sought to explain the phenomenon in very Darwinian terms, looking at the advantage in genetic terms gained by reproducing monogamous pairs. In the 1970s, primatologist Sarah Hrdy suggested that pair-bonding might have evolved to be [protective against infanticide](#) because marauding male monkeys would not be motivated to harm their own genetic offspring but would be motivated to remove any offspring from a group that were not theirs.

This interpretation has been challenged in more recent times, particularly by anthropologist Holly Dunsworth. She argues that the [kind of cognitive power](#) required for a primate to understand whether offspring is genetically theirs or not is just not present in primate species. Perhaps pair-bonded species don’t have infanticide not just because the male primates are trying to maximize their genetic reproductive potential, but because primates are social animals and those male primates are simply primed to be ‘nice’ to the offspring of the females they are bonded to.

[Current theories for why pair bonding exists](#), even though it doesn’t allow male primates to maximize their mating opportunities, follow several lines of evidence to understand what the actual adaptive benefit might be. One theory is that pair-bonding is the only way for males to keep up with females who roam over large territories; it allows them the opportunity to mate because otherwise, they wouldn’t be able to encounter any females. This is something that seems particularly applicable to the smaller monkeys like marmosets, where females

hold territory.

Another [theory for the evolution of pair bonding](#) in primates looks at the reproductive benefit not just to the individual parent, in terms of the number of offspring possible, but to the effects on the next generation of having one more pair of helping hands. This looks at the net benefit to the offspring itself of having two parents provisioning it. In many species of primates, the offspring are helpless and a considerable burden on their carer. Having another pair of hands around may make the difference between growing an expensive, big-brained baby and falling out of the evolutionary race. Looking again at examples from the primate order we can see that the role of the male parent can be critical in the survival of the species—our male titi monkey will carry his offspring for the first year of their life, until they are old enough to move around on their own.

What does this mean for our own species? Well, we definitively have adopted a pair-bonded architecture—social monogamy is at the core of our societies. Why we have done so is less clear—but as more and more work is done on understanding the benefits of monogamy to a species we see that there are several factors that may have influenced our ancestors' choices to develop such an *outré* mating system. In fact, monogamy in primates seems to have evolved multiple times, and for multiple reasons. [Computational models](#) that have examined the likelihood of different evolutionary explanations have used these multiple evolutionary episodes in our nearest relatives to predict that, for humans, multiple factors may have given us the monogamy we have now. Adaptations to pair bonding that ensure males meet roving females might have been a stepping stone to developing the kind of multiple-parental care that keeps something as extraordinarily demanding as a human baby alive. So while our cultural perceptions of monogamy might not fit the evolutionary reality, we can say that as a species, we are awfully fond of a pair bond.

By Brenna R. Hassett

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Source: Human Bridges

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Why Is The US Producing More Oil And Natural Gas Than Ever Under Biden?



Michael Ash ~ University of Massachusetts Amherst

02-21-2024 ~ US crude oil production reached an all-time production high in 2023 — the hottest year on record.

The current year has a one-in-three chance of being even hotter than 2023, which was already the world’s warmest year on record, according to analyses conducted by scientific organizations such as [NASA](#) and [Copernicus Climate Change Service](#). And there is a 99 percent chance that 2024 will rank among the five warmest on

record, according to scientists from the [U.S. National Oceanic and Atmospheric Administration](#).

In the meantime, U.S. crude oil production reached an all-time production high in 2023, solidifying the position of the U.S. as the No. 1 global oil powerhouse. So much for President Joe Biden's vows of "strong" climate action; he has in fact approved [nearly twice](#) the number of oil and gas permits for wells on federal land that former President Donald Trump did in his first three years in office.

Unfortunately, according to a recent Center for Biological Diversity [report](#), "The emissions that will result from the Biden administration's fossil fuel project approvals are larger than the emissions reductions from the Inflation Reduction Act and other climate policies." Moreover, the full effects of the emissions reductions promised by the Inflation Reduction Act will only be felt decades down the road, according to the [U.S. Department of the Treasury](#). On top of that, the U.S. government has yet to effectively address greenhouse gas, water and air pollution from the country's major emitters, as economist Michael Ash reveals in this exclusive interview for *Truthout*. But perhaps this is not surprising, as the federal government ranks No. 6 on the list of greenhouse gas polluters. Ash is professor of economics at the University of Massachusetts Amherst and co-directs the Corporate Toxics Information Project of the Political Economy Research Institute (PERI), which publishes information about the major U.S. polluters and the effects of pollution on communities.

C. J. Polychroniou: Since 2010, climate scientists have set 1.5 degree Celsius, or 2.7 degrees Fahrenheit, as the climate threshold the world should not cross if we hope to avoid dramatic climate disruptions which will make heat waves longer, more extreme and more frequent, increasing in turn the risk of wildfires and exacerbating droughts by drying out soil. A warming of 1.5 degrees Celsius will also lead to other large-scale catastrophes on people, wildlife and ecosystems. Yet, one major [dataset](#) suggests that we already crossed the threshold in 2023 as the world failed again to reduce emissions from burning fossil fuels. In fact, the U.S. produced record amounts of oil and gas in [2023](#), and those records are expected to be shattered again in [2024 and 2025](#). Why is the U.S. producing more oil and natural gas than ever under Biden?

Michael Ash: The core problem is the economic and political power of the fossil fuel industry. This industry has spent decades and billions of dollars investing in

political and media campaigns of misinformation and astroturfing hostility to converting the U.S. energy system to an efficient and renewable basis.

A decade ago, I attended Transformational Trends, a conference sponsored by *Foreign Policy* magazine, and Jack Gerard, then-president and CEO of the American Petroleum Institute, observed that technological innovation (fracking and other unconventional extraction technology) had “changed the landscape.” I think it was a slip of the tongue that revealed more than intended. But he was correct that we are now in the remarkable situation that the U.S. has become a net fossil energy exporter.

It’s true that U.S. households as well as industrial and commercial users rely heavily on fossil fuels as well as electricity powered by fossil fuels. That reliance can make people think that expanded oil and gas production is a demand-side consumer problem. But enormous advances in renewable generation, efficiency and storage put transition within reach. It’s crucial to put fossil fuels out of reach and to do it in an equitable way that ensures access, affordability and environmental justice.

I’m sympathetic to people who would like to get the entire transition done by making efficiency, renewables and storage so cheap and accessible that no one would even imagine choosing to use dirty and unjust fossil fuels. Those investments in efficiency, renewables and storage are crucial, but it’s also essential that we stop burning fossil fuels very soon.

There are excellent policy instruments available for reducing the use of oil, natural gas and coal. My preferred instrument is a strict and shrinking cap on the total amount of fossil fuels introduced into the U.S. economy, with permits auctioned and the auction proceeds distributed equitably as carbon dividends. There are other approaches, such as carbon taxation, that achieve similar ends. These approaches are not a set-it-and-forget-it solution; they need monitoring for compliance, for fairness and for environmental justice. But they are an important step, and there really must be a “no to carbon” as well as a “yes to alternatives.”

The United States is the second-biggest carbon polluter after China. Now, you and some of your colleagues at the Political Economy Research Institute (PERI) have introduced the Corporate Toxics Information Project, which “develops and disseminates information and analysis on corporate releases of pollutants and the

consequences for communities.” And you have just released the figures for 2021, which is the latest year for which data has been published. Which are the top U.S. companies responsible for direct release of greenhouse gases, and where does the U.S. government itself rank overall?

In terms of direct releases of greenhouse gases, our [Greenhouse 100 Polluters Index](#) pinpoints electricity production with fossil fuels as the biggest direct corporate contributor. These are [Scope 1 emissions](#) [or direct greenhouse gas emissions] going directly from the company into the atmosphere. The top 10 is dominated by fossil fuel-burning electric utilities such as Vistra Energy, Southern Company and Duke Energy. ExxonMobil, at No. 9, is the only top 10 company for which oil refining operations rather than electricity generation is the main greenhouse gas source. The federal government ranks as No. 6 on the list.

Direct corporate emissions are important, but companies that introduce fossil fuels into the U.S. economy are another concern. Four large oil companies top our [Greenhouse 100 Suppliers Index](#): Marathon Petroleum, Phillips 66, Valero Energy and ExxonMobil account collectively for one-quarter of the total greenhouse gas emissions from fossil fuel combustion in the U.S. economy. Rounding out the top 10 are two coal companies, Peabody Energy (No. 5) and Arch Resources (No. 7); three additional oil companies, Chevron (No. 6), PBF Energy (No. 9) and PDVSA (No. 10); and a natural gas firm, Enterprise Products Partners (No. 8). The top 10 fossil fuel suppliers alone account for over 40 percent of greenhouse gas emissions from fossil fuel in the U.S. That is a remarkable concentration, which gives some sense of the incentive and capacity that these companies have to resist controls on fossil fuels. At the same time, that same concentration creates an excellent opportunity for effective intervention; there are simply not that many entry points for fossil fuels in the U.S. economy.

Which companies are the top polluters on the Toxic Air and Toxic Water Index?

In addition to monitoring corporate responsibility for greenhouse gases, we also track corporate emissions of toxics with our [Toxic 100 Air Polluters](#) and [Toxic 100 Water Polluters](#) indexes. Here we are assessing company releases of strongly toxic substances with effects primarily on local populations near company facilities.

Some companies that are high on both the Air and Water Polluter lists are

chemical giants LyondellBasell Industries, Dow Inc. and BASF.

Low-income and underrepresented groups tend to be more exposed to air pollution and toxic chemicals. Why is so much pollution found in disadvantaged communities, and what exactly are the environmental justice (EJ) indicators included in PERI's air and water indexes?

The U.S. has a long history of environmental injustice. Pollution is a costly, negative byproduct of making valuable goods and services. Companies sell their output for profit and try to dispose of the wastes at low cost. Displacing the wastes for free onto communities that are not well positioned to resist — communities of color, poor communities and other communities with less representation and less social capital — has been a main method for disposing of pollution cheaply. It's a form of exploitation. When siting their polluting facilities and the storage and disposal of waste, companies disproportionately select communities of color and poor communities. The EJ measurements in the PERI indexes document this environmental injustice.

The first basis of assessing the Toxic 100 Polluters is their contribution to potential chronic human health risk, which combines information on the quantities of over 600 different toxic chemicals that they emit, the relative toxicity of each chemical and the size and exposure of nearby populations affected by the releases. There is a long history of unequal exposure of minority populations and of low-income populations to these corporate environmental hazards. In addition to tabulating the total population risk, we also compute the share of the risk that accrues to minority populations and low-income populations. If the population more or less "downwind" of a polluting facility is, say, 45 percent minority, then the minority share of the risk from the facility is 45 percent. (The water polluters environmental justice assessment is based on proximity to polluted stream reaches — meaning a length of stream with no confluences. The greenhouse polluters environmental justice assessment is based on simple proximity to the facility.) We assess each toxic release for its potentially disproportionate impact on minorities or on low-income people and then aggregate that to the company as a whole.

For example, ExxonMobil, which ranks 20th on Toxic 100 Air Polluters, has an EJ minority share of 68 percent (compared to a 37 percent minority share in the U.S. population).

To what extent can it be said that the companies mentioned earlier engage in environmental crimes?

It is extremely difficult to connect the emissions we are analyzing from U.S. EPA data with permitting data or other indications that the releases are allowed. Many of these emissions are legal without a permit and many more have permits from the U.S. EPA or the state environmental agency. Indeed, much U.S. environmental regulation is in the form of right-to-know laws, such as those that enable our analysis. The right-to-know approach means that corporations are under legal mandate to publicly report their pollution, but after the reports are filed and published, citizens, employees, consumers, shareholders and managers are left to respond as they see fit. For the right-to-know approach to improving corporate environmental performance to have any chance of success, you need to have stakeholders with access to the information, the ability to interpret the information and the capacity and incentive to respond to the information.

Environmental crimes are regarded as a form of white-collar crime. Isn't it time that the world started treating environmental crimes as crimes against humanity?

That question is outside my scope of expertise. We are certainly facing a situation in which population health is in serious jeopardy from corporate pollution. Obviously, we need significant regulation that will result in a much cleaner environment.

This interview has been lightly edited for clarity.

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C.J. Polychroniou is a political scientist/political economist, author, and journalist who has taught and worked in numerous universities and research centers in Europe and the United States. Currently, his main research interests are in U.S. politics and the political economy of the United States, European economic integration, globalization, climate change and environmental economics, and the deconstruction of neoliberalism's politico-economic project. He is a regular contributor to *Truthout* as well as a member of *Truthout's* Public Intellectual Project. He has published scores of books and over 1,000 articles which have appeared in a variety of journals, magazines, newspapers and popular news websites. Many of his publications have been translated into a multitude of different languages, including Arabic, Chinese, Croatian, Dutch, French, German,

Greek, Italian, Japanese, Portuguese, Russian, Spanish and Turkish. His latest books are *Optimism Over Despair: Noam Chomsky On Capitalism, Empire, and Social Change* (2017); *Climate Crisis and the Global Green New Deal: The Political Economy of Saving the Planet* (with Noam Chomsky and Robert Pollin as primary authors, 2020); *The Precipice: Neoliberalism, the Pandemic, and the Urgent Need for Radical Change* (an anthology of interviews with Noam Chomsky, 2021); and *Economics and the Left: Interviews with Progressive Economists* (2021).

Why Ecosystems Need Healthy Populations Of Apex Predators To Be Restored



Jimmy Videle ~ Source: YouTube

20-02-2024 ~ *Wolves benefit the entire ecosystem they inhabit. So why hunt them?*

What if restoring ecosystems was as easy as letting nature do what she intends? From the microscopic level, which constantly churns and builds the “living soil”—from where all life originates—to the massive ungulates that wander the

plains and forests, like bison, moose, and wapiti.

Top predators like wolves are integral to maintaining the natural balance and for the ecosystem to thrive.

People tend to believe that wolves are vicious and dangerous. Perhaps this myth originates from the fables we learned as children, like “Little Red Riding Hood” and “The Three Little Pigs.” Yet, between 2002 and 2020, there were [only 26 deaths from wolf attacks worldwide](#).

For the most part, wolves tend to run at the first sight of a human. They have evolved to understand that humans are dangerous. Around 40,000 people have died due to gun violence in the U.S. as of December 7, 2023, [according](#) to the Gun Violence Archive. Considering these fatalities, which species should we be more wary of: wolves or humans?

I live in southern Québec, where eastern wolves (*Canis lupus lycaon*) patrol the forests. Historically, they could be found throughout the deciduous forests of the eastern United States and southeastern Canada.

According to Parks Canada, their range has [shrunk dramatically](#), and [less than 1,000 eastern wolves](#) could be found in south-central Ontario and south-central Quebec in 2015. Eastern wolves have been “listed as a species of special concern” under the [Canadian Species at Risk Act](#) and “threatened” under [Ontario’s Endangered Species Act, 2007](#).

Québec has an annual [hunting season](#) for all wolves from October to April—five months when these animals need to look over their shoulders. They have become so cautious of humans that they [avoid](#) areas where hunters are present.

When the wolves leave, it significantly impacts the ecosystem. But it is not just in Québec. Hunting the gray wolf (a larger cousin of the eastern wolf) is legal in every Canadian province and territory.

The gray wolf (*Canis lupus*) once ranged over most of the northern hemisphere. Following a steep decline of the gray wolf population—starting with colonization, as expansion destroyed habitat and game and livestock were [threatened](#)—they were extirpated from the contiguous 48 United States, except for a few hundred in Minnesota and Isle Royale National Park, Michigan.

The gray wolves were listed for protection under the U.S. [Endangered Species Act \(ESA\)](#) in 1978 when efforts arose to [reintroduce them to some of their historic range](#). The [culling of gray wolves was previously allowed](#) to protect livestock in Arizona, Idaho, Michigan, Minnesota, Montana, New Mexico, Wisconsin, and Wyoming. As of 2022, following a [court order](#), they are once again protected under the ESA, except in Alaska, Idaho, Montana, and Wyoming.

“Throughout their range, wolves are keystone predators and have a profound effect on the ecosystems they inhabit. The wide range of habitats in which wolves can thrive reflects their adaptability as a species,” said Stephen Guertin, the deputy director for policy at the U.S. Fish and Wildlife Service, in [testimony](#) before the U.S. House of Representatives in 2016.

“In his essay titled, ‘[Thinking Like a Mountain](#) ,’ the great American conservationist Aldo Leopold described the cascading effect of losing wolves in a forested mountain ecosystem—the resulting increase of deer, followed by overgrazing, deforestation, and erosion, and then the collapse of deer [populations] after having eaten themselves out of house and home,” [added](#)Guertin.

In a [research article](#) published in August 2023 in the journal Science Advances, a team of scientists from Michigan Technological University and Arizona State University pointed out how the changes in the genetics of gray wolves in Isle Royale National Park, Michigan, affected the prey population (moose) as well as the insect and flora populations, which are all associated to each other.

In conclusion, the researchers [assessed](#) that “forest dynamics can be traced back to changes in the genetic characteristics (processes) of a predator population.”

Extrapolating on the study, Anaissa Ruiz-Tejada, a graduate science writer at the School of Life Sciences at Arizona State University, [concluded](#) in a September 2023 article that the research “emphasizes the interconnectedness of species in ecosystems and how one species’ well-being can affect others.”

“It underscores the necessity of holistic conservation strategies that consider genetic diversity to ensure the robustness and health of intricate ecosystems.”

Wolves benefit the entire ecosystem they inhabit.

So why hunt them?

Hunting Wolves Is Big Business

Humans are disrupting the balance of the ecosystem to increase profits and generate more income from hunting elk, moose, and white-tailed deer—species that are primary food sources for wolves—and from big game hunting outfitters.

Outfitters in Alberta, Canada, charge anything from \$6,000 to \$10,000 for an almost guaranteed taking of a moose or a white-tailed deer. Companies in Idaho, meanwhile, charge up to \$10,000 for the opportunity to take a “trophy” elk. Wealthy people from cities invade remote locations to “kill” the largest species of any kind they can find for sport and bragging rights.

According to the International Wolf Center, one adult wolf [requires](#) at least “15 to 19 adult-sized deer per wolf per year” to sustain itself. Considering [around 1,000 eastern wolves remain](#) in Canada, they need at least 15,000 deer.

However, humans hunt these deer, generating revenue for the government instead of letting them be food for wolves. This prioritizes economics over the environment and puts humans out of sync with the natural world.

The more plentiful the deer, the more enthusiastic hunters become. The total revenue from hunting licenses, permits, and tags in the United States in the four states where wolves are killed (Alaska, Idaho, Montana, and Wyoming) was nearly \$90 million in 2020, 10 percent of the total U.S. revenue of [\\$902 million](#) from these activities. Spending on hunting in all of Canada exceeded [\\$5.9 billion in 2018](#). Hunting is a huge business.

Is There Justification for Wolf Hunting?

According to a September 2023 NPR [article](#) , 23 cows and calves and 62 sheep were killed by wolves in Idaho in the past year. In response, the state Department of Fish and Game has allowed for the “harvesting” of 500 wolves over the past few years and would like to see the wolf population decline from 1,300 to 500.

In Montana, the state’s Fish, Wildlife, and Parks Department [reported](#) that 58 cattle and 41 sheep were killed by wolves in 2022. Of the 1,087 estimated wolf population, 248 were harvested during that year. Meanwhile, Montana [passed](#) regulations in 2021 that allow the hunting and trapping of [450 wolves per year](#) with an extended season.

In 2022, 46 cattle and 46 sheep were either injured or killed by wolves in Wyoming, and humans killed 95 wolves during the period. The Wyoming Game and Fish Department implemented an objective hunting plan for wolves in 2022 to diminish the population from approximately [338 to 160](#).

Effectively, the three state governments want to see the wolf population cut down by more than 1,400 per year.

When it has been determined that a wolf has killed a rancher's livestock, the rancher is [compensated](#) at fair market value. They may lose the animal, but they don't lose income. Since this causes a payout by the respective governments, wolves take away from the potential of big game hunting and directly diminish game and fish department budgets.

But far from causing economic loss, wolves are beneficial to humans. According to a 2021 [research article](#) published in Proceedings of the National Academy of Sciences, the existence of wolves leads to economic benefits to humans that are "63 times greater than the costs of verified wolf predation on livestock."

I have heard firsthand from ministry biologists in Canada and even the Nature Conservancy, a nonprofit environmental group, that we *must* kill deer because they destroy the forests. What if we allowed wolves to return to the ranges they once inhabited and help naturally restore the balance in the ecosystem instead?

Letting the Wolves Come Home

Wolves are selective hunters. They target young, sick, or infirmed animals. The fastest, strongest, and wisest of the prey escape to continue the genetic line.

"New research shows that by reducing populations and thinning out weak and sick animals, wolves are helping create more resilient elk herds," [pointed out](#) a 2020 article in National Geographic.

The winters in the north are harsh, and the snow can be deep. Those deer, elk, and moose that survive their predators and the harsh weather conditions will become more adaptive to these factors.

Going deeper into the issue, my understanding from personal observations is that wolves know their terrain. They follow trails, scents, and scat, and will feed on those animals that do the least damage to the herd.

For example, if the wolf pack kills the strongest male or the most fertile female, there is a possibility that the herd will be depleted to the point of dying off over time. There are no wolves if there are no deer, elk, or moose. The wolves understand this.

Referring to research from Yellowstone National Park, the 2020 National Geographic article explained how the return of the gray wolf to the park after 25 years has resulted in the wolves being a “[stabilizing force](#)” there. “[T]hey would rather kill an undernourished 750-pound bull versus a 450-pound cow. So by targeting bulls during years of scarce food, they give the cows a chance to reproduce, thus keeping the population afloat.”

Emphasizing the importance of wolves in maintaining a healthy ecosystem and biodiversity, Joseph Bump, an ecologist at the University of Minnesota, [explained](#) in a 2022 Discover magazine article that wolves influence not only the populations of the prey they consume but also the populations of the food sources for their prey.

The forests and mountains where wolves live know their howling. Leopold expressed how it feels to live in their world in his essay, “[Thinking Like a Mountain](#)”:

“Only the mountain has lived long enough to listen objectively to the howl of the wolf. Those unable to decipher the hidden meaning know nevertheless that they are there, for it is felt in all wolf country, and distinguishes that country from all other lands. It tingles in the spine of all who hear wolves by night, or who see their tracks by day.”

As modern humans, we lead different lives from our ancestors, who depended entirely on the natural world for their regional survival.

When the resources kept the tribes alive, it was apparent that if they depleted them, it would put their lives in jeopardy. This is learned behavior, and every other living being besides humans knows how to live in harmony with nature.

If we stop being manipulated by the almighty dollar, there is a wealth of information we can learn from, especially if we pay attention to the flora and fauna surrounding us. When we read between the lines of the Game and Fish Department propaganda, we will realize that tax revenue from hunting is blurring

the focus of what should be their entire mission: the protection of species and the ecosystems in which they all live.

As a concerted naturalist and citizen scientist, I witness the interactions between plant and animal communities and their integral relationship to each other every day.

We need to veer away from our human desire to exploit nature through competition and greed. Instead, we must embrace social and natural harmony and cooperation for the benefit of all. Among the multitude of lessons that we can learn from wolves, this may be the most important.

By Jimmy Videle

Author Bio:

Jimmy Videle is a farmer, naturalist, and researcher. He is the author of [The Veganic Grower's Handbook: Cultivating Fruits, Vegetables, and Herbs from Urban Backyard to Rural Farmyard](#) (Lantern Press, 2023) and the co-founder of [NAVCS-Certified Veganic](#). He is a contributor to the [Observatory](#). His writing has appeared in CounterPunch, Countercurrents, and LA Progressive, among others.

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Advances In Archaeology Allow Us To Understand Political Evolution And Social Change In Deep Time



02-20-2024 ~ Western society is largely in the grips of an entrenched mythology that premodern non-Western states and empires were organized despotically, markedly different from how humans govern themselves in the contemporary West. There's another common myth that dynamic periods of prosperity and well-being were exclusive to Europe during

preindustrial times. We're still reckoning with the 19th-century academic belief that human history developed along two major paths: the West and the rest.

Early anthropology and archaeology were dominated by notions of progress and the categorization of human behaviors through successive evolutionary ages. Human history was misinterpreted through linear, generalized sequences of societal change; school children and college graduates were taught to imagine political evolution from tribes to chiefdoms to states, a great ladder of being that placed then-dominant European societies on the top rung.

This approach repeatedly fell short in the light of new findings in archaeology, as no clear patterns or laws emerged by comparisons of social history either regionally or globally that were pressed into these categories of evolution. For instance, disparities like the delayed introduction of metal in pre-Hispanic Mesoamerica and the absence of a text-based writing system in the pre-Hispanic Andes contradicted the notion of uniform growth seen in empires from early Eurasia.

Even as we still reckon with that legacy today, Mesoamerican researcher and archaeologist Gary M. Feinman makes the case in a [2023 paper](#) that current understandings of a more global and detailed archaeological record offer a new vantage toward interpreting long-term political change. Today, the wealth of qualitative and quantitative archaeological data challenges the Eurocentric notion of a single linear course in human history.

The traditional comparative approaches in archaeology, often categorical and binary, are being reshaped by powerful new findings, made possible by decades-long research programs in archaeology that have seen improved chronological controls, wider global coverage, and multiscale analyses in many investigated

regions. As a result, the way of reading historical narratives changed strikingly, importantly in our understanding of long-term political change.

Rather than projecting recent organizational patterns—often recorded during colonial eras, back in time—archaeologists can now study patterns of change looking forward from deep in the past. In other words, we need to eliminate now-dated postulates and accept that long-term political change does not follow uniform or directed paths. Rather the change happens differently across space and time.

We should focus on case-specific variation and acknowledge that human cooperative patterns, and the resultant institutions that are founded, have more situational and contingent histories and that sequences of change were often impacted by open networks of exchange, conquest, and warfare that fomented new challenges and opportunities. This modern model to examine long-term political change is less universal but is more realistic and precise, and since we often know outcomes, deep-time histories provide a rich record of human experience that we can learn and draw from when facing current challenges.

By Gary M. Feinman and David M. Carballo

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Gary M. Feinman is an archaeologist and the MacArthur curator of anthropology at the Field Museum of Natural History in Chicago.

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Source: Human Bridges

Credit Line: This article was produced by [Human Bridges](#).