

The Ancient Patterns Of Migration



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Today's hot-button issue is actually as old as the human race.

We live in an era of mass migration. According to the [United Nations' World Migration Report 2022](#), there were 281 million international migrants in 2020, equaling 3.6 percent of the global population. That's well over twice the number in 1990 and over three times the estimated number in 1970. In countries that receive them, migrants are often blamed, rightly or wrongly, for everything from higher crime to declining wages to social and cultural disruption.

But the frictions provoked by migration are not new problems; they are deeply embedded in human history and even prehistory. Taking a long-term, cultural-historical perspective on human population movements can help us reach a better understanding of the forces that have governed them over time, and that continue to do so. By anchoring our understanding in data from the archeological record, we can uncover the hidden trends in human migration patterns and discern (or at least form more robust hypotheses about) our species' present condition—and, perhaps, formulate useful future scenarios.

Globalization in the modern context, including large-scale migrations and the

modern notion of the “state,” traces back to Eurasia in the period when humans first organized themselves into spatially delimited clusters united by imaginary cultural boundaries. The archeological record shows that after the last glacial period—ending about 11,700 years ago—intensified trade sharpened the concept of borders even further. This facilitated the control and manipulation of ever-larger social units by intensifying the power of symbolic constructions of identity and the self.

Then as now, cultural consensus created and reinforced notions of territorial unity by excluding “others” who lived in different areas and displayed different behavioral patterns. Each nation elaborated its own story with its own perceived succession of historical events. These stories were often modified to favor some members of the social unit and justify exclusionist policies toward peoples classified as others. Often, as they grew more elaborate, these stories left prehistory by the wayside, conveniently negating the common origins of the [human family](#). The triggers that may first have prompted human populations to migrate into new territories were probably biological and subject to changing climatic conditions. Later, and especially after the emergence of our own species, *Homo sapiens*, the impulse to migrate assumed new facets linked to culture.

From Nomadism to Migration

The oldest migrations by hominins—the group consisting of [humans](#), extinct human species, and all our immediate ancestors—took place after the emergence of our genus, *Homo*, in Africa some [2.8 million years ago](#) and coincided roughly with the appearance of [the first recognizably “human” technologies: systematically modified stones](#). Interestingly, these early “[Oldowan](#)” tool kits (after the Olduvai Gorge site in Tanzania) were probably made not only by our genus but also by other hominins, including *Paranthropus* and Australopithecines.

What role did stone tools play in these early steps along our evolutionary path? Archeology tells us that ancient humans increasingly invested in toolmaking as an adaptive strategy that provided them with some advantages for survival. We see this in the noticeable increase in the geographical distribution of archeological sites beginning about 2 million years ago. This coincided with rising populations and also with the first significant hominin migrations out of Africa and into Eurasia.

Toolmaking in Oldowan technocomplexes—distinct cultures that use specific

technologies—shows the systematic repetition of very specific chains of operations applied to stone. This suggests that the techniques must have been learned and then incorporated into the sociobehavioral norms of the hominin groups that practiced them. In fact, there are similarities between the first Eurasian stone tool kits and those produced at the same time in Africa. Technological know-how was being learned and transmitted—and that implies that hominins were entering into a whole new realm of culture.

While the archeological record dating to this period is still fragmentary, there is evidence of a hominin presence in widely separated parts of Eurasia—China and Georgia—from as early as 2 million to 1.8 million years ago; we know that hominins were also present in the Near East and Western Europe by around 1.6 million to 1.4 million years ago. While there is no evidence suggesting that they had mastered fire making, their ability to thrive in a variety of landscapes—even in regions quite different from their original African savannah home—demonstrates their impressive adaptive flexibility. I believe that we can attribute this capacity largely to toolmaking and socialization.

How can we envision these first phases of human migrations?

We know that there were different species of *Homo* (*Homo georgicus*, *Homo antecessor*) and that these pioneering groups were free-ranging. Population density was low, implying that different groups rarely encountered each other in the same landscape. While they certainly competed for resources with other large carnivores, this was probably manageable thanks to a profusion of natural resources and the hominins' technological competence.

From around 1.75 million years ago in Africa and 1 million years ago in Eurasia, these hominins and their related descendants created new types of stone tool kits, referred to as “[Acheulian](#)” (after the [Saint-Acheul](#) site in France). These are remarkable for their intricacy, the standardization of their design, and the dexterity with which they were fashioned. While the Acheulian tool kits contained a fixed assortment of tool types, some tools for the first time displayed regionally specific designs that prehistorians have identified with specific cultural groups. As early as 1 million years ago, they had also learned to make fire.

Acheulian-producing peoples—principally of the *Homo erectus* group—were a fast-growing population, and evidence of their presence appears in a wide variety

of locations that sometimes yield high densities of archeological finds. While nomadic, Acheulian hominins came to occupy a wide geographical landscape. By the final Acheulian phase, beginning around 500,000 years ago, higher population density would have increased the likelihood of encounters between groups that we know were ranging within more strictly defined geographical radiuses. Home base-type habitats emerged, indicating that these hominin groups returned cyclically to the same areas, which can be identified by characteristic differences in their tool kits.

After the Oldowan, the Acheulean was the longest cultural phase in human history, lasting some 1.4 million years; toward its end, our genus had reached a sufficiently complex stage of cultural and behavioral development to promulgate a profoundly new kind of cognitive awareness: the awareness of self, accompanied by a sense of belonging within a definable cultural unit. This consciousness of culturally based differences eventually favored the separation of groups living in diverse areas based on geographically defined behavioral and technological norms. This was a hugely significant event in human evolution, implying the first inklings of “identity” as a concept founded on symbolically manufactured differences: that is, on ways of doing or making things.

At the same time, the evidence suggests that networking between these increasingly distinct populations intensified, favoring all sorts of interchange: exchange of mates to improve gene pool variability, for example, and sharing of technological know-how to accelerate and improve adaptive processes. We can only speculate about other kinds of relations that might have developed—trading of stories, beliefs, customs, or even culinary or medicinal customs—since “advanced” symbolic communicative networking, emblematic of both Neandertals and humans, has so far only been recognized from the Middle Paleolithic period, from 350,000 to 30,000 years ago.

Importantly, no evidence from the vast chronological periods we have outlined so far suggests that these multilayered encounters involved significant inter- or intraspecies violence.

That remained the case moving into the Middle Paleolithic, as the human family expanded to include other species of *Homo* over a wide territorial range: Neandertals, Denisovans, *Homo floresiensis*, *Homo luzonensis*, *Homo naledi*, Neshar Ramla *Homo*, and even the first *Homo sapiens*. Thanks to [advances in the](#)

[application of genetic studies to the paleoanthropological record](#), we now know that interbreeding took place between several of the species known to have coexisted in Eurasia: humans, Neandertals, and Denisovans. Once again, the fossil evidence thus far does not support the hypotheses that these encounters involved warfare or other forms of violence. By around 150,000 years ago, at least six different species of *Homo* occupied much of Eurasia, from the Siberian steppes to the tropical Southeast Asian islands, and still no fossil evidence appears of large-scale interpopulational violence.

Some 100,000 years later, however, other varieties appear to have died away, and *Homo sapiens* became the only *Homo* species still occupying the planet. And occupy it they did: By some time between 70,000 and 30,000 years ago, most of the Earth's islands and continents document human presence. Now expert in migrating into new lands, human populations flourished in constantly growing numbers, overexploiting other animal species as their dominion steadily enlarged.

Without written records, it's impossible to know with any certainty what kinds of relationships or hierarchies might have existed during the final phases of the Paleolithic. Archeologists can only infer from the patchy remains of material culture that patterns of symbolic complexity were intensifying exponentially. Art, body decoration, and incredibly advanced tool kits all bear witness to socially complex behaviors that probably also involved the cementing of hierarchical relationships within sharply distinct social units.

By the end of the last glacial period and into the Neolithic and, especially, protohistoric times—when sedentarism and, eventually, urbanism, began but before written records appear—peoples were defining themselves through distinct patterns and standards of manufacturing culture, divided by invented geographic frontiers within which they united to protect and defend the amassed goods and lands that they claimed as their own property. Obtaining more land became a decisive goal for groups of culturally distinct peoples, newly united into large clusters, striving to enrich themselves by increasing their possessions. As they conquered new lands, the peoples they defeated were absorbed or, if they refused to relinquish their culture, became the have-nots of a newly established order.

An Imagined World

After millions of years of physical evolution, growing expertise, and geographic

expansion, our singular species had created an imagined world in which differences with no grounding in biological or natural configurations coalesced into multilayered social paradigms defined by inequality in individual worth—a concept measured by the quality and quantity of possessions. Access to resources—rapidly transforming into property—formed a fundamental part of this progression, as did the capacity to create ever-more efficient technological systems by which humans obtained, processed, and exploited those resources.

Since then, peoples of shared inheritance have established strict protocols for assuring their sense of membership in one or another national context. Documents proving birthright guarantee that “outsiders” are kept at a distance and enable strict control by a few chosen authorities, maintaining a stronghold against any possible breach of the system. Members of each social unit are indoctrinated through an elaborate preestablished apprenticeship, institutionally reinforced throughout every facet of life: religious, educational, family, and workplace.

Peoples belonging to “alien” constructed realities have no place within the social unit’s tightly knit hierarchy, on the assumption that they pose a threat by virtue of their perceived difference. For any person outside of a context characterized by a relative abundance of resources, access to the required documents is generally denied; for people from low-income countries seeking to better their lives by migrating, access to documents is either extremely difficult or impossible, guarded by sentinels charged with determining identitarian “belonging.” In the contemporary world, migration has become one of the most strictly regulated and problematic of human activities.

It should be no surprise, then, that we are also experiencing a resurgence of nationalistic sentiment worldwide, even as we face the realities of global climate deregulation; nations now regard the race to achieve exclusive access to critical resources as absolutely urgent. The protectionist response of the world’s privileged, high-income nations includes reinforcing conjectured identities to stoke fear and sometimes even hatred of peoples designated as others who wish to enter “our” territories as active and rightful citizens.

Thanks to the very ancient creation of these conceptual barriers, the “rightful” members of privileged social units—the haves—can feel justified in defending and validating their exclusion of others—the have-nots—and comfortably deny them

access to rights and resources through consensus, despite the denigrating and horrific experiences these others might have undergone to ameliorate their condition.

Incredibly, it was only some 500 years ago that an unwieldy medieval Europe, already overpopulated and subject to a corrupt and unjust social system, (re)discovered half of the planet, finding in the Americas a distinct world inhabited by many thousands of peoples, established there since the final phases of the Upper Pleistocene, perhaps as early as 60,000 years ago. Neither did the peoples living there, who had organized themselves into a variety of social units ranging from sprawling cities to seminomadic open-air habitations, expect this incredible event to occur. The resource-hungry Europeans nevertheless claimed these lands as their own, decimating the original inhabitants and destroying the delicate natural balance of their world. The conquerors justified the genocide of the Indigenous inhabitants in the same way we reject asylum seekers today: on the grounds that they lacked the necessary shared symbolic referents.

As we step into a newly recognized epoch of our own creation—the Anthropocene, in which the human imprint has become visible even in the geo-atmospheric strata of our planet—humans can be expected to continue creating new referents to justify the exclusion of a new kind of migrant: the climate refugee. What referents of exclusion will we invoke to justify the refusal of basic needs and access to resources to peoples migrating from inundated coastal cities, submerged islands, or lands rendered lifeless and non-arable by pollutants?

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Source: [Independent Media Institute](#)

Credit Line: This article was produced by [Human Bridges](#), a project of the Independent Media Institute.

Interview With Noam Chomsky On The State Of The World



Noam Chomsky

We live in a world facing existential threats while extreme inequality is tearing our societies apart and democracy is in sharp decline. The U.S., meanwhile, is bent on maintaining global hegemony when international collaboration is urgently needed to address the planet's numerous challenges. In the interview that follows, Noam Chomsky explains why we are at the most dangerous point in human history and why nationalism, racism, and extremism are rearing their ugly heads all over the world today.

Chomsky is institute professor emeritus in the Department of Linguistics and Philosophy at MIT and laureate professor of linguistics and Agnese Nelms Haury Chair in the Program in Environment and Social Justice at the University of Arizona. One of the world's most-cited scholars and a public intellectual regarded by millions of people as a national and international treasure, Chomsky has published more than 150 books in linguistics, political and social thought, political economy, media studies, U.S. foreign policy, and world affairs. His latest books are *Illegitimate Authority: Facing the Challenges of Our Time* (with C. J. Polychroniou; Haymarket Books); *The Secrets of Words* (with Andrew Moro; MIT Press, 2020); *The Withdrawal: Iraq, Libya, Afghanistan, and the Fragility of U.S. Power* (with Vijay Prashad; The New Press, 2022); and *The Precipice: Neoliberalism, the Pandemic, and the Urgent Need for Social Change* (with C. J. Polychroniou; Haymarket Books, 2021).

C. J. Polychroniou: Noam, you have said on numerous occasions that the world is at the most dangerous point in human history. Why do you think so? Are nuclear weapons more dangerous today than they were in the past? Is the surge in right-wing authoritarianism in recent years more dangerous than the rise and subsequent spread of fascism in the 1920s and 1930s? Or is it because of the climate crisis, which you have indeed said that it represents the biggest threat the world has ever faced. Can you explain in comparative terms why you think that the world is today significantly more dangerous than it used to be?

Noam Chomsky: The climate crisis is unique in human history and is getting more severe year by year. If major steps are not taken within the next few decades, the world is likely to reach a point of no return, facing decline to indescribable catastrophe. Nothing is certain, but this seems a far too plausible assessment.

Weapons systems steadily become more dangerous and more ominous. We have been surviving under a sword of Damocles since the bombing of Hiroshima. A few years later, 70 years ago, the U.S., then Russia, tested thermonuclear weapons, revealing that human intelligence had “advanced” to the capacity to destroy everything.

Operative questions have to do with the sociopolitical and cultural conditions that constrain their use. These came ominously close to breaking down in the 1962 missile crisis, described by Arthur Schlesinger as the most dangerous moment in world history, with reason, though we may soon reach that unspeakable moment again in Europe and Asia. The MAD system (mutually assured destruction) enabled a form of security, lunatic but perhaps the best short of the kind of social and cultural transformation that is still unfortunately only an aspiration.

After the collapse of the Soviet Union, the MAD system of security was undermined by Clinton’s aggressive triumphalism and the Bush II-Trump project of dismantling the laboriously constructed arms control regime. There’s an important recent study of these topics by [Benjamin Schwartz and Christopher Layne](#), as part of the background to Russia’s invasion of Ukraine. They review how Clinton initiated a new era of international affairs in which the “United States became a revolutionary force in world politics” by abandoning the “old diplomacy” and instituting its preferred revolutionary concept of global order.

The “old diplomacy” sought to maintain global order by “an understanding of an

adversary's interests and motives and an ability to make judicious compromises." The new triumphant unilateralism sets as "a legitimate goal [for the US] the alteration or eradication of those arrangements [internal to other countries] if they were not in accord with its professed ideals and values."

The word "professed" is crucial. It is commonly expunged from consciousness here, not elsewhere.

In the background lies the Clinton doctrine that the U.S. must be prepared to resort to force, multilaterally if we can, unilaterally if we must, to ensure vital interests and "uninhibited access to key markets, energy supplies and strategic resources."

The accompanying military doctrine has led to creation of a far more advanced nuclear weapons system that can only be understood as "a preemptive counterforce capability against Russia and China" (Rand Corporation) – a first-strike capacity, enhanced by Bush's dismantling of the treaty that barred emplacement of ABM systems near an adversary's borders. These systems are portrayed as defensive, but they are understood on all sides to be first-strike weapons.

These steps have significantly weakened the old system of mutual deterrence, leaving in its place greatly enhanced dangers.

How new these developments were, one might debate, but Schwartz and Layne make a strong case that this triumphant unilateralism and open contempt for the defeated enemy has been a significant factor in bringing major war to Europe with the Russian invasion of Ukraine, with the potential to escalate to terminal war.

No less ominous are developments in Asia. With strong bipartisan and media support, Washington is confronting China on both military and economic fronts. With Europe safely in its pocket thanks to Russia's invasion of Ukraine, the U.S. has been able to expand NATO to the Indo-Pacific region, thus enlisting Europe in its campaign to prevent China from developing – a program considered not just legitimate but highly praiseworthy. One of the administration doves, [Commerce Secretary Gina Raimondo](#), expressed the consensus lucidly: "If we really want to slow down China's rate of innovation, we need to work with Europe."

It's particularly important to keep China from developing sustainable energy, where it is far in the lead and should reach energy self-sufficiency by 2060 according to [Goldman Sachs analysts](#). China is even threatening to make new breakthroughs in batteries that might help save the world from climate catastrophe.

Plainly a threat that must be contained, along with China's insistence on the One-China policy for Taiwan that the U.S. also adopted 50 years ago and that has kept the peace for 50 years, but that Washington is now rescinding. There's much more to add that reinforces this picture, matters we have discussed elsewhere.

It's hard to say the words in this increasingly odd culture, but it's close to truism that unless the U.S. and China find ways to accommodate, as great powers with conflicting interests often did in the past, we are all lost.

Historical analogies have their limits of course, but there are two pertinent ones that have repeatedly been adduced in this connection: The Concert of Europe established in 1815 and the Versailles treaty of 1919. The former is a prime example of the "Old Diplomacy." The defeated aggressor (France) was incorporated into the new system of international order as an equal partner. That led to a century of relative peace. The Versailles treaty is a paradigm example of the "revolutionary" concept of global order instituted by the triumphalism of the '90s and its aftermath. Defeated Germany was not incorporated into the postwar international order but was severely punished and humiliated. We know where that led.

Currently, two concepts of world order are counterposed: the UN system and the "rules-based" system, correlating closely with multipolarity and unipolarity, the latter meaning U.S. dominance.

The U.S. and its allies (or "vassals" or "[subimperial states](#)" as they are sometimes called) reject the UN system and demand adherence to the rules-based system. The rest of the world generally supports the UN system and multipolarity.

The UN system is based on the UN Charter, the foundation of modern international law and the "supreme law of the land" in the U.S. under the U.S. Constitution, which elected officials are bound to obey. It has a serious defect: it

rules out U.S. foreign policy. Its core principle bans “the threat or use of force” in international affairs, except in narrow circumstances unrelated to U.S. actions. It would be hard to find a U.S. postwar president who has not violated the U.S. Constitution, a topic of little interest, the record shows.

What is the preferred rules-based system? The answer depends on who sets the rules and determines when they should be obeyed. The answer is not obscure: the hegemonic power, which took the mantle of global dominance from Britain after World War II, greatly extending its scope.

One core foundation stone of the U.S.-dominated rules-based system is the World Trade Organization. We can ask, then, how the U.S. honors it.

As global hegemon, the U.S. is alone in capacity to impose sanctions. These are third-party sanctions that others must obey, or else. And they do obey, even when they strongly oppose the sanctions. One example is the U.S. sanctions designed to strangle Cuba. These are opposed by the whole world as we see from regular UN votes. But they are obeyed.

When Clinton instituted sanctions that were even more savage than before, the European Union called on the WTO to determine their legality. The U.S. angrily withdrew from the proceedings, rendering them null and void. There was a reason, explained by Clinton’s Commerce Secretary [Stuart Eizenstat](#): “Mr. Eizenstat argued that Europe is challenging ‘three decades of American Cuba policy that goes back to the Kennedy Administration,’ and is aimed entirely at forcing a change of government in Havana.”

In short, Europe and the WTO have no competence to influence the long-standing U.S. campaign of terror and economic strangulation aimed at forcefully overthrowing the government of Cuba, so they should get lost. The sanctions prevail, and Europe must obey them – and does. A clear illustration of the nature of the rules-based order.

There are many others. Thus, the [World Court](#) ruled that U.S. freezing of Iranian assets is illegal. It scarcely caused a ripple.

That is understandable. Under the rules-based system, the global enforcer has no more reason to accede to ICJ judgments than to decisions of the WTO. That much was established years ago. In 1986, the U.S. withdrew from ICJ jurisdiction when

it condemned the U.S. for its terrorist war against Nicaragua and ordered it to pay reparations. The U.S. responded by escalating the war.

To mention another illustration of the rules-based system, the U.S. alone withdrew from the proceedings of the Tribunal considering Yugoslavia's charges against NATO. It argued correctly that Yugoslavia had mentioned genocide, and the U.S. is self-exempted from the international treaty banning genocide.

It's easy to continue. It's also easy to understand why the U.S. rejects the UN-based system, which bans its foreign policy, and prefers a system in which it sets the rules and is free to rescind them when it wishes. There's no need to discuss why the U.S. prefers a unipolar rather than multipolar order.

All of these considerations arise critically in consideration of global conflicts and threats to survival.

CJP: All societies have seen dramatic economic transformations over the past 50 years, with China leading the pack as it emerged in just the course of just a few decades from an agrarian society into an industrial powerhouse, lifting in the process hundreds of millions out of poverty. But this is not to say that life is necessarily an improvement over the past. In the U.S., for instance, the quality of life has declined over the past decade and so has life satisfaction in the European Union. Are we at a stage where we are witnessing the decline of the West and the rise of the East? In either case, while many people seem to think that the rise of the far-right in Europe and the United States is related to perceptions about the decline of the West, the rise of the far-right is a global phenomenon, ranging from India and Brazil to Israel, Pakistan and the Philippines. In fact, the alt-right has even found a comfortable home on China's internet. So, what's going on? Why are nationalism, racism and extremism making such a huge comeback on the world stage at large?

NC: There is an interplay of many factors, some specific to particular societies, for example, the dismantling of secular democracy in India as Prime Minister Modi pursues his project of establishing a harsh racist Hindu ethnocracy. That's specific to India, though not without analogues elsewhere.

There are some factors that have fairly broad scope, and common consequences. One is the radical increase in inequality in much of the world as a consequence of the neoliberal policies emanating from the U.S. and UK and

spreading beyond in various ways.

The facts are clear enough, particularly well-studied for the U.S. The Rand corporation study we've discussed before estimated almost \$50 trillion in wealth transferred from workers and the middle class – the lower 90% of income – to the top 1% during the neoliberal years. More information is provided in the work of Thomas Piketty and Emanuel Saez, summarized lucidly by political economist [Robert Brenner](#).

The basic conclusion is that through “the postwar boom, we actually had decreasing inequality and very limited income going to the top income brackets. For the whole period from the 1940s to the end of the 1970s, the top 1% of earners received 9-10% of total income, no more. But in the short period since 1980, their share, that is the share of the top 1%, has gone up to 25%, while the bottom 80% have made virtually no gains.”

That has many consequences. One is reduction of productive investment and shift to a rentier economy, in some ways a reversion from capitalist investment for production to feudal-style production of wealth, not capital – “fictitious capital,” as Marx called it.

Another consequence is breakdown of the social order. In their incisive work [The Spirit Level](#), Richard Wilkinson and Kate Pickett show a close correlation between inequality and a range of social disorders. One country is off the chart: very high inequality but even greater social disorder than expected by the correlation. That's the country that led the way in the neoliberal assault – formally defined as commitment to small government and the market, in practice radically different, more accurately described as dedicated class war making use of whatever mechanisms are available.

Wilkinson-Pickett's revealing work has been carried forward since, recently in an important study by [Steven Bezruchka](#). It seems well confirmed that inequality is a prime factor in breakdown of social order.

There have been similar effects in the UK under harsh austerity policies, extending elsewhere in many ways. Commonly, the hardest hit are the weak. Latin America suffered two lost decades under destructive structural adjustment policies. In Yugoslavia and Rwanda such policies in the '80s sharply exacerbated social tensions, contributing to the horrors that followed.

It's sometimes argued the neoliberal policies were a grand success, pointing to the fastest reduction in global poverty in history — but failing to add that these remarkable achievements were in China and other countries that firmly rejected the prescribed neoliberal principles.

Furthermore, it wasn't the "Washington consensus" that induced U.S. investors to shift production to countries with much cheaper labor and limited labor rights or environmental constraints, thereby deindustrializing America with well-known consequences for working people.

It is not that these were the only options. Studies by the labor movement and by Congress's own research bureau (OTA, since disbanded) offered feasible alternatives that could have benefited working people globally. But they were dismissed.

All of this forms part of the background for the ominous phenomena you describe. The neoliberal assault is a prominent factor in the breakdown of the social order that leaves great numbers of people angry, disillusioned, frightened, contemptuous of institutions that they see are not working in their interests.

One crucial element of the neoliberal assault has been to deprive the targets of means of defense. Reagan and Thatcher opened the neoliberal era with attacks on unions, the main line of defense of working people against class war. They also opened the door to corporate attacks on labor, often illegal, but that doesn't matter when the state they largely control looks the other way.

A primary defense against class war is an educated, informed public. Public education has come under harsh attack during the neoliberal years: sharp defunding, business models that favor cheap and easily disposable labor (adjuncts, graduate students) instead of faculty, teaching-to-test models that undermine critical thinking and inquiry, and much else. Best to have a population that is passive, obedient and atomized, even if they are angry and resentful, and thus easy prey for demagogues skilled in tapping ugly currents that run not too far below the surface in every society.

CJP: We have heard on countless occasions from both political pundits and influential academics that democracy is in decline. Indeed, the Economist Intelligence Unit (EIU) claimed in early 2022 that just only 6.4% of the world's population enjoys "full democracy," though it is anything but clear how the sister

company of the conservative weekly magazine *The Economist* understands the actual meaning and context of the term “full democracy.” Be that as it may, I think we can all agree that there are several key indicators pointing to a dysfunction of democracy in the 21st century. But isn’t it also the case that a perception of a crisis of democracy has existed almost as long as modern democracy itself? Moreover, isn’t it also the case that general talk about a crisis of democracy applies exclusively to the concept of liberal democracy, which is anything but authentic democracy? I am interested in your thoughts on these topics.

NC: What exactly is a crisis of democracy? The term is familiar. It was, for example, the title of the first publication of the Trilateral Commission, liberal internationalist scholars from Europe, Japan, and the U.S. It stands alongside the Powell Memorandum as one of the harbingers of the neoliberal assault that was gathering steam in the Carter administration (mostly trilateralists) and took off with Reagan and Thatcher. The Powell memorandum, addressing the business world, was the tough side; the Trilateral Commission report was the soft liberal side.

The Powell memorandum, authored by Justice Lewis Powell, pulled no punches. It called on the business world to use its power to beat back what it perceived as a major attack on the business world – meaning that instead of the corporate sector freely running almost everything, there were some limited efforts to restrict its power. The streak of paranoia and wild exaggerations are not without interest, but the message was clear: Launch harsh class war and put an end to the “time of troubles,” a standard term for the activism of the 1960s, which greatly civilized society.

Like Powell, the Trilateralists were concerned by the “time of troubles.” The crisis of democracy was that ‘60s activism was bringing about too much democracy. All sorts of groups were calling for greater rights: the young, the old, women, workers, farmers,..., sometimes called “special interests.” A particular concern was the failure of the institutions responsible “for the indoctrination of the young”: schools and universities. That’s why we see young people carrying out their disruptive activities. These popular efforts imposed an impossible burden on the state, which could not respond to these special interests: a crisis of democracy.

The solution was evident: “more moderation in democracy.” In other words, a return to passivity and obedience so that democracy can flourish. That concept of democracy has deep roots, going back to the Founding Fathers and Britain before them, revived in major work on democratic theory by 20th century thinkers, among them Walter Lippmann, the most prominent public intellectual; Edward Bernays, a guru of the huge public relations industry; Harold Lasswell, one of the founders of modern political science; Reinhold Niebuhr, known as the theologian of the liberal establishment.

All were good Wilson-FDR-JFK liberals. All agreed with the Founders that democracy was a danger to be avoided. The people of the country have a role in a properly functioning democracy: to push a lever every few years to select someone offered to them by the “responsible men.” They are to be “spectators, not participants,” kept in line with “necessary illusions” and “emotionally potent oversimplifications,” what Lippmann called “manufacture of consent,” a primary art of democracy.

Satisfying these conditions would constitute “full democracy,” as the concept is understood within liberal democratic theory. Others may have different views, but they are part of the problem, not the solution, to paraphrase Reagan.

Returning the concerns about decline of democracy, even full democracy in this sense is in decline in its traditional centers. In Europe, Orban’s racist “illiberal democracy” in Hungary troubles the European Union, along with Poland’s ruling Law and Justice party and others that share its deeply authoritarian tendencies.

Recently Orban hosted a conference of far-right movements in Europe, some with neo-fascist origins. The U.S. National Conservative Political Action Caucus, a core element of today’s GOP, was a star participant. Donald Trump gave a major address. Tucker Carlson contributed an adoring documentary.

Shortly after, the NCPAC had a conference in Dallas Texas, where the keynote speaker was Victor Orban, lauded as a leading spokesman of authoritarian white Christian nationalism.

These are no laughing matters. At both the state and the national level, today’s Republican party in the U.S., which has abandoned its past role as an authentic parliamentary party, is seeking ways to gain permanent political control as a minority organization, committed to Orban-style illiberal democracy. Its leader,

Donald Trump, has made no secret of his plans to replace the nonpartisan civil service that is a foundation of any modern democracy with appointed loyalists, to prevent teaching of American history in any minimally serious fashion, and in general to end vestiges of more than limited formal democracy.

In the most powerful state of human history, with a long, mixed, sometimes progressive democratic tradition, these are not minor matters.

CJP: Countries in the periphery of the global system seem to be trying to break away from Washington's influence and are increasingly calling for a new world order. For instance, even Saudi Arabia is following Iran to join China and Russia's security bloc. What are the implications of this realignment in global relations, and how likely is it that Washington will use tactics to halt this process from going much further?

NC: In March, Saudi Arabia joined the Shanghai Cooperation Organization. It was followed shortly after by the second Middle East petroleum heavyweight, the United Arab Emirates, which had already become a hub for China's Maritime Silk Road, running from Kolkata in Eastern India through the Red Sea and on to Europe. These developments followed China's brokering a deal between Iran and Saudi Arabia, previously bitter enemies, and thus impeding U.S. efforts to isolate and overthrow the regime. Washington professes not to be concerned, but that is hard to credit.

Since the discovery of oil in Saudi Arabia in 1938, and the recognition soon of its extraordinary scale, controlling Saudi Arabia has been a high priority for the U.S. Its drift towards independence — and even worse, towards the expanding China-based economic sphere — must be eliciting deep concern in policy-making circles. It's another long step towards a multipolar order that that is anathema to the U.S.

So far, the U.S. had not devised effective tactics to counter these strong tendencies in world affairs, which have many sources — including the self-destruction of U.S. society and political life.

CJP: Organized business interests have had decisive influence on U.S. foreign policy over the last two centuries. However, there are arguments made today that there is a loosening of business hegemony over U.S. foreign policy, and China is offered as the evidence that Washington is not listening to business anymore. But

isn't it the case that the capitalist state, while always working on behalf of the general interests of the business establishment, also possesses a certain degree of independence and that other factors enter into the equation when it comes to the implementation of foreign policy and the management of foreign affairs? It seems to me that U.S. foreign policy towards Cuba, for example, is evidence of the relative autonomy of the state from the economic interests of the capitalist classes.

NC: It may be a caricature to describe the capitalist state as the executive committee of the ruling class, but it's a caricature of something that exists, and has existed for a long time. We may recall again Adam Smith's description of the early days of capitalist imperialism, when the "masters of mankind" who owned the economy of England were the "principal architects" of state policy and ensured that their own interests were properly served no matter how grievous the effects on others. Others included the people of England, but much more so the victims of the "savage injustice" of the masters, particularly in India in the early days of England's destruction of what was then along with China the richest society on earth, while stealing its more advanced technology.

Some principles of global order have a long life.

There should be no need to review again how closely U.S. foreign policy has conformed to Smith's maxim, to the present. One guiding doctrine is that the U.S. will not tolerate what State Department officials called "the philosophy of the new nationalism," which embraces "policies designed to bring about a broader distribution of wealth and to raise the standard of living of the masses" along with the pernicious idea "that the first beneficiaries of the development of a country's resources should be the people of that country." They are not. The first beneficiaries are the investor class, primarily from the U.S.

This stern lesson was taught to backward Latin Americans at a hemispheric conference called by the U.S. in 1945, which established an Economic Charter for the Americas that stamped out these heresies. They were not confined to Latin America. 80 years ago, it seemed that at last the world would finally emerge from the misery of the Great Depression and fascist horrors. A wave of radical democracy spread throughout much of the world, with hopes for a more just and humane global order. The earliest imperatives for the U.S. and its British junior partner were to block these aspirations and to restore the traditional order,

including fascist collaborators, first in Greece (with enormous violence) and Italy, then throughout western Europe, extending as well to Asia. Russia played a similar role in its own lesser domains. These are among the first chapters of postwar history.

While Smith's masters of mankind quite generally ensure that state policy serves their immediate interests, there are exceptions, which give a good deal of insight into policy formation. We've just discussed one: Cuba. It's not just the world that objects strenuously to the sanctions policy to which it must conform. The same is true of powerful sectors among the masters, including energy, agribusiness, and particularly pharmaceuticals, eager to link up with Cuba's advanced industry. But the executive committee prohibits it. Their parochial interests are overridden by the long-term interest of preventing "successful defiance" of U.S. policies tracing back to the Monroe doctrine, as the State Department explained 60 years ago.

Any Mafia Don would understand.

The very same individual might make different choices as CEO of a corporation and in the State Department, with the same interests in mind but a different perspective on how to further them.

Another case is Iran, in this case going back to 1953, when the parliamentary government sought to gain control of its immense petroleum resources, making the mistake of believing "that the first beneficiaries of the development of a country's resources should be the people of that country." Britain, the longtime overlord of Iran, no longer had the capacity to reverse this deviation from good order, so called on the real muscle overseas. The U.S. overthrew the government, installing the Shah's dictatorship, the first steps in U.S. torture of the people of Iran that has continued without a break to the present, carrying forward Britain's legacy.

But there was a problem. As part of the deal, Washington demanded that U.S. corporations take over 40% of the British concession, but they were unwilling, for short-term parochial reasons. To do so would prejudice their relations with Saudi Arabia, where exploitation of the country's resources was cheaper and more profitable. The Eisenhower administration threatened the companies with anti-trust suits, and they complied. Not a great burden to be sure, but one the

companies didn't want.

The conflict between Washington and U.S. corporations persists to the present. As in the case of Cuba, both Europe and U.S. corporations strongly oppose the harsh U.S. sanctions on Iran, but are forced to comply, cutting them out of the lucrative Iranian market. Again, the state interest in punishing Iran for successful defiance overrides the parochial interests of short-term profit.

Contemporary China is a much larger case. Neither European nor U.S. corporations are happy about Washington's commitment "to slow down China's rate of innovation" while they lose access to the rich China market. It seems that U.S. corporations may have found a way around the restrictions on trade. An analysis by the [Asian business press](#) found "a strong predictive relationship between these countries' [Vietnam, Mexico, India] imports from China and their exports to the United States," suggesting that trade with China has simply been re-directed.

The same study reports that "China's share of international trade is rising steadily. Its export volume...rose 25% since 2018 while the industrial nations' export volume stagnated."

It remains to be seen how European, Japanese, and South Korean industries will react to the directive to abandon a primary market in order to satisfy the U.S. goal of preventing China's development. It would be a bitter blow, far worse than losing access to Iran or of course Cuba.

CJP: More than a couple of centuries ago, Immanuel Kant presented his theory of perpetual peace as the only rational way for states to co-exist with one another. Yet, perpetual peace remains a mirage, an unattainable ideal. Could it be that a world political order away from the nation-state as the primary unit is a necessary prerequisite for perpetual peace to be realized?

NC: Kant argued that reason would bring about perpetual peace in a benign global political order. Another great philosopher, Bertrand Russell, saw things rather differently when asked about the prospects for world peace:

"After ages during which the earth produced harmless trilobites and butterflies, evolution progressed to the point at which it has generated Neros, Genghis Khans, and Hitlers. This, however, I believe is a passing nightmare; in time the earth will become again incapable of supporting life, and peace will return."

I don't presume to enter those ranks. I'd like to think that humans have the capacity to do much better than what Russell forecast, even if not to achieve Kant's ideal.

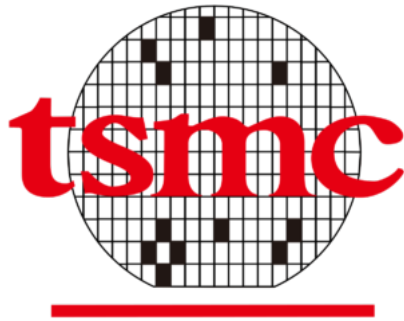
Source:

<https://www.globalpolicyjournal.com/blog/26/05/2023/interview-noam-chomsky-state-world>

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How The U.S. War On Taiwanese

Semiconductors Might Benefit Japan



On May 15, 2023, Berkshire Hathaway reported in a Form 13F [filing](#) to the U.S. Securities and Exchange Commission that it had completed the sale of its \$4 billion stake in Taiwan Semiconductor Manufacturing Co (TSMC). This sale completed a process that began in February 2023, when Berkshire Hathaway [announced](#) that it sold 86 percent of its holdings in TSMC. In April, Berkshire Hathaway's leader Warren Buffett [told](#) Nikkei that the geopolitical tension between the United States and China was "certainly a consideration" in his decision to divest from TSMC. TSMC told Nikkei, is a "well-managed company" but that Berkshire Hathaway would find other places for its capital. At his May 6 morning meeting, Buffett [said](#) that TSMC "is one of the best-managed companies and important companies in the world, and you'll be able to say the same thing five, ten or twenty years from now. I don't like its location and reevaluated that." By "location," Buffett meant Taiwan, in the context of the threats made by the United States against China. He decided to wind down his investment in TSMC "in the light of certain things that were going on." Buffett announced that he would move some of this capital towards the building of a fledgling U.S. domestic semiconductor industry.

[TSMC](#), based in Hsinchu, Taiwan,, is the world's largest semiconductor manufacturer. In 2022, it [accounted](#) for 56 percent of the share of the global market and over 90 percent of advanced chip manufacturing. Warren Buffett's investment in TSMC was based on the Taiwanese company's immense grip on the world semiconductor market. In August 2022, U.S. President Biden signed the [CHIPS and Science Act](#) into law, which will [provide](#) \$280 billion to fund semiconductor manufacturing inside the United States. On December 6, 2022, Biden joined TSMC's Chairman Dr. Mark Liu at the \$40 billion expansion of TSMC's semiconductor factories in North Phoenix, Arizona. Dr. Liu [said](#) at the project's announcement that the second TSMC factory is "a testimony that TSMC is also taking a giant step forward to help build a vibrant semiconductor ecosystem in the United States."

The first TSMC plant will open in 2024 and the second, which was [announced](#) in December, will open in 2026. On February 22, 2023, the New York Times ran a long [article](#) (“Inside Taiwanese Chip Giant, a U.S. Expansion Stokes Tensions”), which pointed out—based on interviews with TSMC employees—that “high costs and managerial challenges” show “how difficult it is to transplant one of the most complicated manufacturing processes known to man halfway across the world.” At the December 6 announcement, Biden [said](#), “American manufacturing is back,” but it is only back at a much higher cost (the plant’s construction cost is ten times more than it would have cost in Taiwan). “The most difficult thing about wafer manufacturing is not technology,” Wayne Chiu—an engineer who left TSMC in 2022—told the New York Times. “The most difficult thing is personnel management. Americans are the worst at this because Americans are the most difficult to manage.”

Blow up Taiwan

U.S. Ambassador Robert O’Brien, the former National Security Advisor of Donald Trump, [told](#) Steve Clemons, an editor at Semafor, at the Global Security Forum in Doha, Qatar, on March 13, 2023, “The United States and its allies are never going to let those [semiconductor] factories fall into Chinese hands.” China, O’Brien said, could build “the new OPEC of silicon chips” and thereby, “control the world economy.” The United States will prevent this possibility, he said, even if it means a military strike. On May 2, 2023, at a Milken Institute event, U.S. Congressman Seth Moulton [said](#) that if Chinese forces move into Taiwan, “we will blow up TSMC. ... Of course, the Taiwanese really don’t like this idea.”

These outlandish statements by O’Brien and Moulton have a basis in a widely circulated [paper](#) from the U.S. Army War College, published in November 2021, by Jared M. McKinney and Peter Harris (“Broken Nest: Deterring China from Invading Taiwan”). “The United States and Taiwan should lay plans for a targeted scorched-earth strategy that would render Taiwan not just unattractive if ever seized by force, but positively costly to maintain. This could be done effectively by threatening to destroy facilities belonging to the Taiwan Semiconductor Manufacturing Company,” they write.

Right after Moulton made these incendiary remarks, former U.S. defense undersecretary Michèle Flournoy [said](#) that it was a “terrible idea” and that such an attack would have a “\$2 trillion impact on the global economy within the first year and you put manufacturing around the world at a standstill.”

Taiwan's officials responded swiftly to Moulton, with minister of defense Chiu Kuo-cheng [asking](#), "How can our national army tolerate this situation if he says he wants to bomb this or that?" While Chiu responded to Moulton's statement about a military strike on TSMC, in fact, the U.S. government has already attacked the ability of this Taiwanese company to remain in Taiwan.

Taiwan's economics vice minister Lin Chuan-neng [said](#) in response to these threats and Buffett's sale of TSMC that his government "will do its utmost to let the world know that Taiwan is stable and safe." These incendiary remarks aimed at China now threaten the collapse of Taiwan's economy.

Made in Japan

In his May 6 meeting, Warren Buffett [said](#) something that gives a clue about where the semiconductor manufacturing might be diverted. "I feel better about the capital that we've got deployed in Japan than Taiwan," he said. In 1988, 51 percent of the world's semiconductors were [made](#) in Japan, but [as of 2022](#), the number is merely 9 percent. In June 2022, Japan's Ministry of Economy, Trade, and Industry (METI) [announced](#) it would put in 40 percent of a planned \$8.6 billion for a semiconductor manufacturing plant by TSMC in Kumamoto. METI [said](#) in November that it has selected the Rapidus Corporation—which includes a stake by NTT, SoftBank, Sony, and Toyota—to manufacture next-generation 2-nanometer chips. It is likely that Berkshire Hathaway will invest in this new business.

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This article was produced by [Globetrotter](#)

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Source: Globetrotter

The Rise And Fall Of Greece's Radical-in-Name-Only Syriza Party



On January 25, 2015, Greece's left-wing party Syriza (Coalition of the Radical Left), which subscribed to no particular ideology but ran an election campaign that vowed to end the sadistic austerity measures that had been imposed on Greece by its international creditors, shred the bailout agreements into pieces, write off a big chunk of the debt, and

create jobs for hundreds of thousands of unemployed, won the legislative elections by taking 36% of the popular vote. The result of the election sent shock waves through Europe's political establishment and marked the return of hope for Greece and left-wing parties and movements around the world.

It was indeed a historic victory for the Left, especially considering the fact that, ten years earlier, Syriza was struggling to gain just a few seats in the Greek parliament. The Communist Party of Greece was far more popular than the Coalition of the Radical Left, whose ranks included an array of leftists ranging from Trotskyists, Maoists, and neo-Marxists to greens and feminists. Indeed, while the Communist party had solid links with working-class people and exerted decisive influence on trade union activism, Syriza's ["impact on civil society was confined to the ideological attraction that it had for a small segment of the academia."](#)

On May 21, 2023, elections were held in Greece and the conservative New Democracy party of Prime Minister Kyriakos Mitsotakis scored a landslide victory, trouncing Syriza by 20 percentage points. However, the new electoral system of proportional representation that had been introduced under the former prime minister and Syriza leader Alexis Tsipras prevents New Democracy's 40% vote to win an outright majority of the 300 seats in parliament. Mitsotakis had revealed all along that he is not interested in sharing power, so a second election is going

to take place in late June where the winning party needs to achieve just 37% of the popular vote.

The scale of Syriza's defeat in the parliamentary elections of May 21 (lost all but one of the 59 electoral regions in Greece) may signify the end of the road for the party of Alexis Tsipras. The party's demise has in fact been underway from the very first weeks that Tsipras took office as Greece's prime minister. Lack of experience in governance, ideological confusion, severe structural constraints, but also crude political opportunism and broken promises pretty much guaranteed that Syriza's downfall was just a matter of time.

First, the radical-in-name-only Syriza party formed a government with the right-wing and xenophobic party Independent Greeks. There were deep disparities of all sorts between the two parties, but obviously this did not matter to Tsipras since he saw forging an alliance with right-wingers as a necessary tactical move to secure power. And power was all that ever mattered to Syriza's leader and his inner circle. During the 2023 election campaign, Tsipras would leave many leftist voters flabbergasted by courting voters from the neo-Nazi party Golden Dawn.

Second, Tsipras signed an agreement to extend the austerity measures imposed on Greece by the euro masters, only a few weeks after coming to power.

Third, Syriza's leader gambled on Greece's future with a sham referendum in order to save his government from collapse and then went on to betray an entire nation that voted overwhelmingly against the continuation of austerity by signing [a new bailout agreement](#) that continued Greece's status as Germany's "de facto colony."

Tsipras called the new bailout agreement "a necessary choice," though he had engaged in ferocious attacks against his predecessors for having signed similar bailout agreements with the international creditors.

More than 40 Syriza MP's spoke against the new measures, and half of Syriza's central committee sided against the new agreement. But none of this mattered. Syriza had very weak democratic structures, no real links with the Greek working-class, and Tsipras had total authority over party decisions as most policy issues were decided in unofficial meetings with people close to the "great leader." Moreover, Syriza as a party had lost its autonomy once it gained power and "[was subsumed into the state.](#)"

Indeed, it was abundantly clear to any unbiased observer that Syriza's inner circle consisted of people who were dedicated to the pursuit and maintenance of power rather than bringing about radical change. Subsequently, following his government's capitulation to the euro masters, Tsipras took steps to rebrand the party as a "progressive" political force and begun to tap into the legacy of the Pasok party, one of Greece's center-left political parties, and to emulate more and more the political persona and political tactics of its charismatic founder and former Prime Minister Andreas Papandreou, who, incidentally, also appeared on the Greek political scene as a radical who made exorbitant promises to the people, such as socializing the economy, modernizing the countryside, terminating membership in NATO, and shutting down U.S. military bases in Greece.

Since the end of the Second World War, sadly enough, the [Greek left has been betrayed by its own leaders](#) on multiple occasions. The end result of Syriza's abandonment of radicalism was defection on the part of hundreds of thousands of mostly working-class voters, though its metamorphosis into a mainstream political party attracted many center-left voters to its ranks.

In the 2019 legislative elections, Syriza still managed to gather 31.5% of the popular vote, losing just less than four points since its last victory in 2015, but the conservative New Democracy party not only won and secured a comfortable majority of 158 out of 300 seats, but had a remarkable 11-point increase from 2015.

Moreover, unlike Tsipras' "leftist" government, Mitsotakis' conservative government kept many of its campaign promises and handled some foreign policy crises rather effectively. For example, Mitsotakis kept his promise to cut taxes, including a 22% cut to an unpopular property tax introduced during the first bailout agreement, suspended the value added tax on new construction, and reduced the insurance costs of employees and businesses.

Big capital and the middles classes have been the main beneficiaries of Mitsotakis' efforts to rejuvenate the Greek economy. Because of the pandemic, Greece's gross domestic product (GDP) contracted by 9% in 2020, but grew by 8.43% in 2021 and by 5.91% in 2022. Tourism contributed greatly to the strong rebound in GDP, and the economic prosperity of Greece remains strongly tied to the development of tourism.

However, Greece's current accounts deficit increased substantially in 2022, mainly due to the worsening of the balance of goods. And the government debt-to-GDP ratio stood at 171.3% at the end of 2022, which is really at unsustainable levels, though the mainstream press in Greece would not devote space to presenting gloomy economic data ahead of the elections.

But it's doubtful that doing so would have made any difference. The truth of the matter is that there is an impression among many Greek voters that the Mitsotakis' government has stabilized the economy, protects the national interest more than adequately, and that it would be suicidal to have Syriza back in power after all its broken promises and flimsy statements made about the economy by key party members during an election campaign, which included a proposal for "local complementary currencies" by the party's former minister of finance and which came only a few days after [Yanis Varoufakis](#) (rightly or wrongly, one of the most unpopular political figures in all of Greece) had called for the adoption of a parallel currency "Dimitra." Syriza's shaky position on key issues of national security was also a major drawback for many voters.

Indeed, it seems that what lies at the heart of the 2023 Greek legislative election results is that many voters were distrustful of Tsipras and his politics. This is most likely why so many voters appeared unfazed by revelations of a major surveillance scandal that engulfed the conservative prime minister himself. Mitsotakis' New Democracy government is made up of right-wing conservatives and even includes in its ranks a couple of high-ranking officials with a history of involvement in far-right politics, but it seems that voters were more concerned with Syriza's own deficiencies rather than those of the ruling conservative party.

Voters also delivered "a crushing defeat" to Yanis Varoufakis' MeRA25 party as it failed to cross the 3% threshold to re-enter parliament.

Among left-wing parties, only the Greek Communist party performed better, gathering 7.23% of the popular vote over 5.3% in 2019.

In sum, the future of the left in Greece looks anything but promising at present. With the revival of Pasok, which had been in steep decline electorally since 2012 but managed to get 11.46% of the popular vote in the 2023 legislative elections, Syriza's long demise may be complete a few years from now. And it will be very difficult for the current Communist party to climb into double digits even if Syriza

returns to the dark days of securing low-to-mid single digit votes.

But the Greek left has suffered many crippling blows in the past and always finds a way to resurrect itself, to rise like a phoenix from the ashes. Because as long as exploitation, injustice, and extreme inequality remain central aspects of human society, there will always be a need to create a radical vision for the future.

Source: <https://www.commondreams.org/opinion/rise-and-fall-of-syriza-in-greece>

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The Deplorable Work Conditions Behind Harrods' \$7,000 'Ambootia Snow Mist' Darjeeling Tea



Photo: Counterview

In 2015, after you were done gawking at the [statue of Princess Di](#) in the world's largest department store, [Harrods](#) in London, you could head on over to the world-famous food halls where you could buy, among other high-priced indulgences, a type of tea branded "Ambootia Snow Mist."

At [\\$7,864](#) per kilogram—enough to make about 300 cups—Snow Mist regularly made appearances on listicles sporting headlines like "[21 Gifts that Prove Harrods Has Finally Lost Its Fucking Mind](#)."

Sold exclusively by London's high-end department store for about a decade starting in the late 2000s, the tea was grown on the Happy Valley Tea Estate, a 400-plus acre plantation nestled in the Himalayan hills, near the third tallest mountain in the world and the large town of Darjeeling.

Happy Valley is located in northern West Bengal, the same state as Bangla-speaking Kolkata, but the lingua franca in the region is Nepali. Locals known as Indian Gorkhas (to distinguish them from Nepali Gorkhas) have been agitating for almost four decades to get their own [state called Gorkhaland](#).

The second oldest of Darjeeling's 87 tea plantations, Happy Valley was established by a Britishman in 1854, just five years after Harrods. Happy Valley passed into the hands of an elite Bengali in the early 1900s. From there, it changed hands several times until it was abandoned, lying dormant up until the early 2000s (it is not uncommon for tea gardens to be semi-frequently abandoned by their owners, leaving workers, staff, and even managers in a lurch).

Many tea plantations have been taken over by investors looking for short-term profits but who lack a long-term vision for the tea industry. The standard playbook for this "promoter class" of new owners goes something like this: take out a huge loan against the tea land, siphon the capital to other businesses, and drive workers to further pauperization. It is well known in and around the industry that these owners routinely fail to pay legally required pension contributions and evade land taxes.

Importantly, the land itself is owned by the state of West Bengal, not by the owners of the plantations, who lease it long term.

These promoters also tend to abandon the tea plantations during the annual bonus period, allegedly due to worker protest and discontent, while also failing to clear all back pay that is due. The annual bonus period falls at the end of the calendar year and marks a time when employers and unions negotiate a bonus that workers get for regional holidays. Although it is true that there are more workers protesting during these periods in a perennial bid to negotiate higher bonuses, the claim by owners that said protests are the primary reason they must abandon their plantations doesn't hold up to scrutiny.

Later, with the help of the government and even the tea workers' own unions, these owners will often reopen the plantations and gardens under conditions that require workers to accept lower wages than what they previously earned, accept further casualization, and take lost jobs on the chin.

In the mid-2000s, Happy Valley, along with about a dozen other Darjeeling estates, became part of a company headed by businessman [Sanjay Bansal](#). Bansal was not supposed to be one of *those guys*, one of the plantation owners who games the system at the expense of workers—his initial approach led many to believe he would handle business differently. Bansal was an “incredibly successful... international player for a decade,” says Sarah Besky, a cultural anthropologist and associate professor at Cornell's School of Industrial and Labor Relations. But even major figures in the tea industry engage in unsavory practices.

Besky has spent a great deal of time studying Darjeeling's tea industry and workers. “Anybody who knows anything about Darjeeling tea knows about Makhaibari and Ambootia,” Besky told TRNN. “The symbolic importance of Ambootia is huge.”

Ambootia, the name of [another tea plantation](#), was the brand name behind Harrods' Snow Mist and other teas produced by Darjeeling Organic Tea Estates Private Ltd. (DOTEPL), and it is also the informal name for Bansal's broader company, the Ambootia Group, which owns numerous tea estates in Darjeeling, Assam, and Dooars. In 2015, DOTEPL was worth Rs. 12 billion (\$187 million); in addition to Bansal, investors from Singapore and Europe also had varying stakes in the company at different points in time.

I (Saurav) visited Happy Valley on October 12 of last year, when the tea bushes

were between harvests, or “flushes.” Rain was pouring down from the sky. Nevertheless, workers clad in galoshes and holding umbrellas are still expected to pluck [two leaves and a bud](#) from the bushes in such conditions.

On that day, though, no leaves were being plucked, because the workers were on strike, continuing a months-long labor dispute over backwages, a legally required holiday bonus, and a general state of disrespect from the bosses. Workers on the plantations in the area, including at Happy Valley, had demanded—and eventually won from the state government—a 20 percent bonus marking major holidays, but the mood at Happy Valley was anything but content.

Several dozen of the workers, most of them women, were huddled along the inside walls of a structure that, judging by the sign above, was meant to be a “fair price shop” for tourists and visitors to purchase tea from the plantation. A few men, the field staff, hovered inside, standing impatiently or animatedly pacing the floor. They, too, were being denied their wages.

One worker—let’s call her Chenbagam Rai—told me through interpreters that she worked an eight-hour day, from 7:30AM to 4:00PM, with a break for lunch. Workers typically work six-day weeks for a total of 48 scheduled hours per week. The harvesting quotas they need to meet can range from garden to garden; in some, it might be 7kg worth of tea per day; in others, it might be 11kg. With the help of the interpreters, Chenbagam relayed that she earned the minimum wage for Darjeeling tea workers of Rs. 232 (\$2.81) per day ([soon to be Rs. 250](#)), not counting minor bonuses for exceeding production goals, but including Rs. 9 per day for food. Not only are these wages insufficient for workers to make a living on, they are also on the low end for workers across the industry. In other parts of India, tea plantation workers make more—around Rs. 400 (\$4.93) per day—than their counterparts in Darjeeling do.

A union official (and one of my guides on the visit), Jatan Rai, told me that a living wage would be about Rs. 500 (\$6.16) per day, plus benefits (like housing, access to medical care, etc.) that management is legally mandated to provide. When I was in Darjeeling, I spent a fair amount of time talking with Jatan, who was brought up as the son of two tea workers on an estate and is now the general secretary of the Hamro Hill Terai Dooars Chiabari Shramik Sangh (Hamro Hill Terai Dooars Tea Workers Union), as well as Saakal Dewan, a retired navy officer and [active poet](#). Both Dewan and Jatan Rai, as well as Rai’s union, are affiliated

with a local political party called the Hamro Party (unions generally tend to be affiliated with political parties in India). In India, apart from the railways, tea plantations are the largest organized sector.

In other parts of India, along with higher average wages, tea workers also tend to receive more of the benefits they are legally entitled to under the [Plantations Labour Act](#) of 1951, which instituted a slate of laws meant to secure universal standards for working conditions on Indian plantations. For instance, housing, water, education, healthcare, and other basic needs—all are supposed to be provided by plantation owners. “It is there in the rules—[the] Plantations Act,” said Jatan Rai. But the problem is that there are no real nor consistent enforcement mechanisms; as a result, the reality for workers is very different from what the Act spells out.

According to Rai, things used to be better: “workers used to get multiple benefits. About 20 years back, 30 years back, the garden owners used to provide everything... Now, these days, it is totally gone.”

A staple of the Hamro Party platform is the demand for better conditions for workers in the tea industry. Party leaders are looking for what they describe as a “win-win” situation for owners and workers: an industry that is modernized and run ethically. While such messages sound good on paper, they can only really go so far to reform the tea industry, the entire political economy of which has been built around what Besky argues are deep structural and historical factors that render meaningful reform impossible.

“Many of the people I work with find undermining the system futile because the system is a monster. It is unchallengeable,” says Besky.

“Within [the plantation system’s] kind of DNA, its internal logic [is]... cheap labor, cheap everything. That is the logic of oppression,” she says. Since its integration into the global trade market, that is, cheap, hyper-exploitable labor has been the foundation of the tea industry; any attempts to seriously and systematically address tea workers’ needs for living wages and humane treatment would threaten the structural integrity of the industry itself, as it currently exists. This, Besky explains, is why efforts to reform the industry, including the Plantations Labour Act of 1951, have only borne modest, if any, positive results.

“What’s [most] remarkable is the lack of change... The most striking thing about

the industry, whether it's 10 years or 150 years, [is that] the mode of production is the same."

To illustrate this point, Besky offered one story of a sick Happy Valley worker who sought urgent medical care—she estimated that it took place around the time Harrods was starting to buy from the estate.

"Every plantation operates their ambulance also as a taxi. Someone actually died waiting for the ambulance that was roaming around town," she says.

The story of tea is a story of interconnected continents and expanding systems of capitalist and imperialist exploitation stretching their tendrils across the globe over the course of hundreds of years—and the people bearing the brunt of it all have always been the workers on the plantations.

Tea is now the second most popular beverage in the world after water, with two billion cups consumed each day globally. But it was only incorporated into the capitalist world system in the early 17th century.

As demand grew in Britain and across Europe, there was money to be made. And [boy, was it ever made](#), especially by the entity that would eventually emerge as the monopoly importer: the British East India Company (and its shareholders).

There was a proverbial fly in the ointment, though: [China, the world's only significant exporter of tea](#), didn't want anything that the British East India Company had to offer. As a result, the empire turned to pushing Indian farmers to grow opium, which the British merchants and the East India Company then smuggled into China to trade for tea. The British East India Company, simply put, was effectively a drug cartel. When the Chinese government attempted to crack down on its destructive trade, one consequence was the Opium Wars.

Another was the British deciding that they would try to take over the process of tea production for themselves. In an infamous act of corporate espionage, a botanist [named Robert Fortune](#), originally from Scotland, was sent by the British East India Company to steal tea plants and agricultural know-how from China to see if the company could grow the plant on the hills of Darjeeling and elsewhere in India.

All things considered, the experiment was successful, and as India's tea estates

proliferated in the 19th century, the colony—and then the country—replaced China as the world’s largest producer of tea for a century. Even today, it remains the second largest producer and fourth largest exporter of tea in the world.

Tea plantations became an important part of the colonial economy. From the beginning, owners separated the estates into enclaves where the law of the land barely works. And from the beginning, owners have tried to keep wages as low as possible. The estates require huge tracts of land, and cultivating and harvesting on that land is very labor intensive because the delicacy of the crop necessitates that it be picked by hand, rather than with mechanized devices.

Conditions at Happy Valley are not unique, Rai says later when I (Saurav) followed up with him from New York. “Every tea garden... in Darjeeling is having [the same] issues,” he says.

Because of the conditions on the farms, most young people in the Darjeeling area choose to migrate out to a big city or go into a different line of work, in Darjeeling or nearby; even a construction laborer building roads in town makes Rs. 500 (\$6.16) per day, almost twice that of a plucker. Many fear the tea industry in Darjeeling is on its last leg as a result.

But there are still around 55,000 workers on Darjeeling’s 87 licensed plantations for now, about 20 percent of whom are daily wage laborers, while the rest are permanent. They range in age from 18-60.

I visited another plantation with Dewan, the 950-acre Chongtong estate, which, at the time I visited, was also owned by DOTEPL. It’s only about eight miles from Darjeeling, but it takes an hour to get there due to the bendiness and low quality of the roads winding through the hills.

When the estate is up and running at full capacity, 985 workers work there, and total tea production amounts to 200,000 kg per year. But Chongtong is definitely not running at full capacity these days; more than half the workers have fled for neighboring plantations because they are not getting paid. There used to be one supervisor for every 25-30 pluckers; now, there are far fewer people to supervise.

This kind of situation, or worse, happens at gardens throughout the industry. In gardens where the bushes are not as productive or as high quality as they once were—so-called “sick gardens”—management will simply vanish without paying

workers, without even processing the harvested tea. According to Dewan and Rai, this kind of sudden abandonment is sometimes part of a front operation to transition the grounds [to a tourism site](#).

The global tea trade—and the hyper-exploitation of tea workers—has continued well into the present, [worth \\$200 billion in 2020](#) and expected to rise to \$318 billion by 2025. A 2019 report by [Rosa Luxemburg Stiftung](#) on tea exports from Darjeeling to Germany showed that pluckers tend to keep less than 3 percent of the money generated by the products they harvest. An [Oxfam report](#) the same year found that supermarkets and brands receive 93.8 percent of the final price of a tea bag in the United States, while workers receive 0.8 percent. The situation is only marginally better in India and European countries.

In India, the northern states of Assam and West Bengal are the largest producers of tea in the country. The states of Kerala, Tamil Nadu, and Karnataka in the south also grow significant amounts of the crop.

As a high-end product, Darjeeling tea tends to not sell at large volumes, but the tea stands out due to attempts by the Indian government and the Darjeeling industry to market it internationally and protect its brand.

Regarding Happy Valley and Chongtong, web searches and shipping records show that several Global North companies specifically source from these two plantations, even though the working conditions described throughout this report are well known throughout the industry. These buyers include the French upscale outlet [Mariages Freres](#), which sells Happy Valley tea for the price of €486 (\$505) per kilogram. It also sells tea from Chongtong. [Lipton](#) has sold tea from Chongtong in recent years.

The century-old American tea importer GS Haly [markets Happy Valley tea by the dozens of pounds](#). The German wholesaler The Tea Co. GmbH & Co Kg has sourced from Chongtong, while the German brand Lebensbaum has sourced from Happy Valley. In the UK, [Teahouse Emporium](#) sells Happy Valley tea.

Dozens of other Global North businesses are sourcing from the company as a whole, but we were unable to determine whether the plantations they are doing business with are Happy Valley and Chongtong or others from DOTEPL's past or present array of tea-growing estates.

That array includes many estates that play up the “organic,” “fair trade,” and “people-friendly” practices of the plantations, like the small U.S.-owned, Darjeeling-sourced brand [Alaya tea](#). Meanwhile, Chenbagam Rai and the 55,000 other tea plantation workers in the region are earning less than \$3 a day, if they get paid at all.

Even though they weren’t on strike, the workers at Chongtong—again, mostly Indian Gorkha women—were far more up in arms that day than their counterparts at Happy Valley had been. The pluckers hadn’t been paid for four weeks, averaging around Rs. 2,000 (\$24.65) of lost wages in total. The mid-level supervisory staff also haven’t been paid—for three months. The pluckers told me they had been given assurances that they would be paid their wages eventually, but they didn’t believe the owners’ promises. Workers had reached the point of selling domestic animals—pigs, hens, and other poultry—to sustain themselves and to supplement the free rations they receive from the government.

Even in the best of times at Chongtong, the average income for a household with school-age children is about Rs. 5,000 (\$60.72) per month, while average expenses range between Rs. 12,000 (\$147.92) and Rs. 14,000 (\$172.58). Families make up the difference through remittances they receive, with one earner traveling to cities like Delhi or Mumbai to work and send money back home.

“We are helpless,” Ashima Tamang, a pseudonym for one of the women assembled outside the fields of the Chongtong garden, told me. “Those who are capable—they go to other cities. We don’t have any capacity.” This is the only way to come close to staying financially afloat, workers said, because there’s no other work available to them in the area, and the work that is there does not pay people enough to live on.

It’s not as if the workers have just sat on their hands and obediently accepted these circumstances either. When they are called to attend protests, they show up; but they feel that all their efforts have gone in vain. Speaking through Dewan, in Nepali, the pluckers told me that they want the government to act against the head figure at DOTEPL, Bansal.

At one point, they animatedly demanded that the tea estate be sold to another owner—a wish that would be granted at the end of October.

When it comes to ensuring better wages and working conditions for tea

harvesters, “fair trade” and other certifications are commonly understood as ineffectual at best. At Happy Valley, Rai and Dewan explained, fair trade fees are actually used to reimburse plantation managers for the equipment and other goods they’re supposedly, but not actually, providing workers.

“Most of the gardens... are fair trade certified,” Rai told me later. But “those guidelines of fair trade policies are not being strictly followed; there is a big gap with the reality.”

Besky’s assessment of the fair trade economy is even harsher: “Fair trade and all of these bourgeois means [by which] tea is sold fail because they don’t understand what [the] plantation is.”

There is a complaint box for workers outside the division’s management office at Chongtong, near the spot where the tea is weighed. I was told by my companions, including KS Tsapa, a retired head supervisor of 48 years, that “it is just a formality.”

We have given here a mere snapshot of the present in one corner of the tea industry, but it is worth considering the future for a moment—because the tea industry in Darjeeling may not have a future at all. In the age of finance capital, the incentive structure driving everything toward the end of making fast money has led the tea gardens to the precipice of an existential crisis. For it to prosper, a tea plantation has to go through gradual and diligent processes like replanting after 60-80 years; the bushes have to be maintained for four months during the lean period (winter season); etc.

It is only after steps like these are carefully and painstakingly taken that planters should even consider making a profit, but today’s capitalists are not that patient.

The owners nowadays have primary interests in leveraging their assets for maximum profit, even if leveraging said assets has little to do with reinvesting in, sustaining, and improving the tea industry itself; showing tea gardens as property asset holdings, for instance, may serve the primary function of helping owners get a hold of bank loans, but the resulting money will be invested elsewhere, not back into the tea gardens themselves, after the loans are secured. This practice is one of many that have become increasingly common among tea plantation owners over the past 30 years.

State governments have underwritten the owners' land grabs on tea plantations by introducing "tea tourism" policies enabling them to use tea land for tourism purposes. In West Bengal, for instance, the owners can use up to 15 percent of tea garden land for tea tourism. Even before the concept of "tea tourism" became commonplace for every tea plantation, the case of [Chandmoni Tea Estate](#) in the Terai area of North Bengal bellows from the past a harbinger of what would come to pass in the industry in the name of development.

When tea plantation lands are given away for tourism and township projects, the workers are left with less or no work in their areas, and so far no one has come up with a sustainable answer to the various social and economic crises that result (unemployment, discontent, mass migration, etc.).

So what is to be done if fair trade policies, changing modes of production, unions, lawsuits, the land rights movement, etc. aren't improving conditions for tea workers on Darjeeling's plantations?

The workers on the plantations have tried everything—including selling household animals and vegetables on the side to make do—and their children are fleeing from the region.

"The global community has to build up pressure, because they don't know the darker story," says Rai.

This story, with the support of the [Bertha Foundation](#), is part of The Real News Network's [Workers of the World](#) series, telling the stories of workers around the globe building collective power and redefining the future of work on their own terms.

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Source: Globetrotter

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Capturing Carbon With Machines Is A Failure — So Why Are We Subsidizing It?



*Richard Heinberg -
Photo: Post Carbon
Institute*

Policymakers are pouring money into techno-fixes to solve the climate crisis, even though scientific studies indicate nature-based solutions are all-around more effective.

Human activity—mostly the burning of fossil fuels—has raised Earth's

atmospheric carbon content by 50 percent, from [280 parts per million \(ppm\)](#) to [420 ppm](#). Since the start of the Industrial Revolution, we've [released approximately 950 billion metric tons](#) of carbon into the air. Every year, humans emit [more than 40 billion metric tons](#) of carbon dioxide (CO₂) into the atmosphere, as of 2021 measurements. Even if we stop burning fossil fuels now, the amount of CO₂ already in the atmosphere will cause Earth's climate to continue warming for decades, triggering heat waves, droughts, rising sea levels, and extreme weather.

Climate scientists warn that if we want to avert catastrophe, [a significant amount of excess atmospheric CO₂ must be captured and sequestered](#). The process is called carbon dioxide removal (CDR), and it has been [receiving more attention](#) as nations, states, and industries strive to meet their climate goals. But how should we go about doing it?

There are two broad strategies: biological and mechanical. Nature already absorbs and emits about [100 billion metric tons](#) of carbon dioxide every year through the natural processes in the biosphere—including plant growth—an amount 2.5 times humanity's annual carbon output. So, [according to advocates for biological carbon removal](#), our best bet is simply to help the planet do a little more of what it is already doing to absorb carbon. We could accomplish this through [reforestation](#), [soil-building agricultural practices](#), and encouraging [kelp growth](#) in oceans.

On the other hand, [advocates for mechanical carbon removal](#) point to technologies that successfully capture CO₂ in the laboratory; if these machines were scaled up, those advocates tell us, we could create an enormous new industry with plenty of jobs while removing atmospheric carbon and reducing climate risk. Scientists are exploring [several chemical pathways](#) for direct air capture (DAC) of carbon and ways to [sequester CO₂](#) in porous rock formations. Revenue streams come from government subsidies or from the use of captured CO₂ in enhanced oil recovery (EOR).

So, which pathway—nature or machines—holds more promise?

In its [sixth assessment report](#), released in March 2023, the Intergovernmental Panel on Climate Change (IPCC), the United Nations body that regularly assesses the current state of climate science, [points out](#) that “biological CDR methods like

reforestation, improved forest management, soil carbon sequestration, peatland restoration[,] and coastal blue carbon management can enhance biodiversity and ecosystem functions, employment[,] and local livelihoods.”

On the other hand, notes the IPCC, the implementation of mechanical DAC along with underground sequestration of CO₂ “currently faces technological, economic, institutional, ecological-environmental and socio-cultural barriers.” Further, the current global rates of mechanical carbon capture and storage “are far below those in modeled pathways limiting global warming to 1.5°C to 2°C.”

In a [study](#) published in the journal PLOS Climate in February 2023, a team of American scientists analyzed the benefits and downsides of the two pathways in detail. They used three criteria: effectiveness (“[d]oes the process achieve a net removal of CO₂ from the atmosphere” once all inputs and outputs are accounted for?), efficiency (“[a]t a climate-relevant scale... [of a billion metric tons of CO₂ per year], how much energy and land are required?”), and impacts (“[w]hat are the significant co-benefits or adverse impacts [on nature and society]?”).

The team gathered data and crunched the numbers. The lead author, June Sekera, a carbon researcher and visiting scholar at the New School for Social Research in New York, [concluded](#):

“[B]iological sequestration methods, including restoration of forests, grasslands, and wetlands and regenerative agriculture, are both more effective and more resource efficient in achieving a climate-relevant scale of CO₂ removal than are techno-mechanical methods—which use machinery and chemicals to capture CO₂. Additionally, the co-impacts of biological methods are largely positive, while those of technical/mechanical methods are negative. Biological methods are also far less expensive.”

In this comparative study, the scores for natural versus mechanical carbon removal methods were not close: [Natural methods won](#) in every category—and by a significant margin. The problem with machine-based carbon removal is not just that current technologies are immature (with the hope of getting better with more research and investment), but also that using machines is inherently inefficient, costly, and risky. On the other hand, removing carbon by restoring nature costs less, is more effective at reducing atmospheric carbon, and offers numerous side benefits.

The American study also noted that its [findings](#) “that biological methods exhibit superior effectiveness in comparison to DAC are consistent with data reported in the [2022 IPCC study](#).” It added in plain terms: “According to the IPCC, not only are biological methods of CDR more effective than DAC..., but their effectiveness is projected to increase significantly over time.”

As if to underscore that conclusion, a separate [study](#) published in March 2023 in the journal Nature Climate Change concluded that the protection and rewilding of even a small targeted group of wildlife species would help facilitate the capture and storage of enough carbon to keep the global temperature below the [tipping point of warming 1.5 degrees Celsius](#) above pre-industrial levels.

You might expect, therefore, that policymakers would currently be directing all of their support toward natural carbon removal methods. But you’d be wrong. Government policy support in the form of subsidies is being shoveled mostly into mechanical carbon removal.

In the U.S., the primary subsidy for mechanical CDR is the federal [45Q tax credit](#), introduced in 2008, which offers \$10 to \$20 per metric ton of CO₂ captured and stored. But there are also carbon offset credit programs (including the [California Low Carbon Fuel Standard](#)), subsidies for building CO₂ pipelines, and subsidies for the production of alternative fuels (including ethanol and hydrogen) that rely on carbon capture technology to be considered “low-carbon.” The Inflation Reduction Act of 2022 [significantly increased](#) the number of credits in 45Q and broadened eligibility, and included [federal subsidies for oil producers](#) who pump CO₂ underground to make it easier to extract trapped petroleum—which is by far the most common way of using captured CO₂.

The Bipartisan Infrastructure Law, which President Biden signed in November 2021, included billions in federal funding for carbon capture projects. In the Midwest, as a result, there has been a rush to build thousands of miles of CO₂ pipelines for carbon sequestration—a frenzy that has set off [regulatory chaos](#) and [is pitting farmers](#) and [Native Americans](#) against biofuel plant operators and venture capitalists. Researchers continue to spend time and money finding [new chemical pathways](#) to mechanical CO₂ capture—resources that could instead be diverted to biological CO₂ removal methods. Even [AI](#) is being enlisted in mechanical carbon capture efforts.

There are also subsidies that, in effect, promote nature-based CDR methods, including [soil conservation](#) and [wetlands restoration programs](#), but these programs were not initially intended for carbon capture and sequestration, and they are not optimized for that purpose. In November 2022, at the global COP27 climate summit in Cairo, the Biden administration [announced](#) the “[Nature-Based Solutions Roadmap](#),” an outline of strategic recommendations to put America on a path to “unlock the full potential of nature-based solutions” to address “climate change, nature loss, and inequity.” The roadmap calls for updating policies, providing funding, training a nature-based solutions workforce, and prioritizing research, innovation, knowledge, and adaptive learning to advance nature-based solutions. However, the roadmap remains, for the most part, in the realm of good intentions.

There’s only so much funding available for climate solutions, and the total amount is woefully inadequate. Only strategic investment will obtain significant results for the dollars spent, and it is now clear which path will get results.

Given the clear superiority of nature-based solutions, why is so much support still going toward mechanical carbon capture? Poor judgments in the past have created funding streams and projects with a momentum of their own. Most of the gold-rush fever surrounding mechanical carbon capture can be attributed simply to the lure of subsidies for building new DAC plants and pipelines.

In a 2018 [article](#) published by the Thomson Reuters Foundation, Justin Adams—who at the time was the managing director for global lands at the U.S.-based environmental nonprofit [Nature Conservancy](#)—urged the European Union to take the lead on using nature-based solutions in the climate crisis fight. “Many economists and policy advisors ignore the potential of natural climate solutions at our peril,” warned Adams’s article, calling a 2018 [report](#) by the European Academies’ Science Advisory Council (EASAC) “short-sighted” for downplaying the potential of nature-based climate solutions.

“Natural climate solutions are in fact the world’s oldest negative emissions technology,” Adams wrote. “By managing carbon dioxide-hungry forests and agricultural lands better, we can remove vast quantities of greenhouse gases from the atmosphere and store them in trees and soils.”

The science tells us that policymakers and investors have so far been wrong to

advocate so strongly for mechanical CDR solutions to the detriment of biological ones. The fate of future generations is at stake, and we cannot afford to waste both time and money on techno-fixes that are ineffective at achieving our climate goals. The clear path forward to addressing the looming catastrophic effects of climate change is to restore nature.

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Source: Independent Media Institute

Credit Line: This article was produced by [Earth | Food | Life](#), a project of the Independent Media Institute.