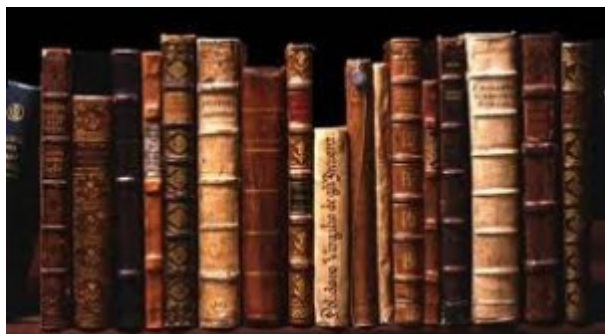


Community Support Helps The Orca Book Cooperative Stay Afloat



11-06-2024 ~ *When COVID-19 hit, U.S. bookshops were an endangered species. Olympia, Washington's largest independent bookstore survived by embracing the co-op model.*

Bookshops have historically served as community gathering spots and hubs for social change besides being spaces where patrons can relax and feed their minds. A notable example is New York's Oscar Wilde Memorial Bookshop, which was the site of [organizational meetings](#) for the [first gay pride parade](#) in 1970.

"Oscar Wilde soon became Information Central. As the first gay bookshop in the country, we amassed something that proved to be invaluable for organizing a march," [wrote](#) Fred Sargeant in his 2010 first-person account for the Village Voice.

Meanwhile, Washington, D.C.'s Drum and Spear Bookstore, "was a creative hub for Black power, Black consciousness, and internationalist activism" from 1968 to 1974, [according](#) to the Library of Congress. The bookshop eventually shut down due to [debt](#).

Despite being bastions of societal advancement, community, and mental nourishment, bookshops have dwindled due to factors like [competition from Amazon](#) and the [popularity of e-books](#). In 2021, the United States Census Bureau [pointed out](#) that "the number of U.S. [b]ookstores dropped from 12,151 in 1998 to 6,045 in 2019."

The pandemic furthered this downward trend. In October 2020, Focus Finance [reported](#) that "sales turnover from brick-and-mortar bookstores declined by 31 percent from January to July 2020. Some bookstores are even seeing year-over-year sales declines as high as [80 percent](#)."

In April 2020, when COVID-19 was in full swing, the Olympia, Washington, bookstore Orca stayed afloat by [adopting](#) the co-op model. As the shop's [site](#) explains, owner Linda Berentsen "was ready to retire but wanted to ensure that the store lived on."

"Diversifying was the only option," says Kait Leamy, an Orca worker-owner since December 2021. "People didn't want Orca to go away, so turning into a member-owned co-op was a great way to fundraise at the time."

Leamy explains that the shop, which existed in various forms for nearly three decades before becoming the Orca Books Cooperative, is now owned by its employees and supportive Olympia community members.

"I think people in this area love that community-run aspect of things," they state, adding that Orca owes its survival to this communal spirit. "The community has saved our lives several times. People in town are supportive on a day-to-day basis by shopping here and also when big, crazy things happen." For example, one crowdsourcing campaign replenished funds lost to an embezzling bookkeeper. Another helped cover veterinary expenses for the shop's resident cat, Orlando.

The bookshop has two kinds of memberships: "[Basic Consumer \[and\] Low-Income Consumer](#)." Each member pays a fee that provides some benefits, discounts, and voting rights.

Olympia is a hot spot for co-ops. In 2019, the Northwest Cooperative Development Center [told](#) the social justice publication Works in Progress that the city had "more cooperatively owned businesses per capita than any other U.S. city (one co-op business for every 5,255 residents)."

Leamy, who was a member of several co-ops while in college, notes, "Now I can't have a job with the hierarchy that regular corporate jobs have, because I am so used to this co-op model where everybody has autonomy, [all] voices are equal, and no one is telling you what to do."

As Olympia's largest independent bookstore, Orca is a space where customers and staff "from all walks of life" form "a vibrant, supportive, and generous book-loving community," the store's site [states](#). "We rejoice in offering a wonderfully eccentric haven for our wonderfully diverse patrons."

The shop's amenities include a free coffee cart and a mutual aid table with medical supplies. Orca also carries cards, calendars, stickers, prints, magnets, T-shirts, and other items crafted by local creatives like noted papercut artist [Nikki McClure](#).

It also [serves](#) as a "community hub for book trade, resource sharing, and community recycling."

"You don't have to spend money to be here," Leamy notes. "These days, there are so few places in the world that you're allowed to just be in, so we try hard to make Orca a welcoming place. I think that helps us because people care and are invested."

Selling mostly used books, Orca strives to keep its prices as low as possible, "so people can have access to the information," according to Leamy. "We're told all the time that we're the cheapest bookstore in town. That feels important to us because new books are getting more and more expensive. A new hardcover these days can be \$45."

Rather than participating in a wholesale process, local authors can sell their books in small numbers at Orca. The shop takes only a small cut, leaving the author with the majority of the sale price.

Orca hosts events such as author talks, poetry readings, mending circles, and book club meetings "where [people] come together, read the same thing, talk about it, and talk about life and the world," Leamy says. "You can't do that on Amazon. Having a physical space and a physical book instead of digital feels important."

Combined with right-wing efforts to ban and burn books, the decrease in face-to-face interaction in the digital age makes the survival of shops like Orca more important than ever.

"Bookstores, particularly, are hard [to maintain] these days," Leamy observes. "There are some days where we say, 'Are we going to make it?' and some days where we're flying high. I think there are enough people out there who want bookstores to exist [bettering the odds] that we can make it."

By Damon Orion

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Decision 2024: Neoliberal Fascism Or Neoliberal Business As Usual?



White House - Photo:
whitehouse.gov

11-03-2024 ~ *Trump's rise the result of the ongoing erosion of the political culture in the U.S. under neoliberalism, which has essentially become the dictatorship of big financial capital.*

With just a few days left until Election Day, the fact that the [race to the White House](#) between U.S. Vice President [Kamala Harris](#) and former President [Donald Trump](#) remains extremely tight is truly mind-boggling. Reason dictates that the Democrats should be set to win a landslide, but what could very well happen instead is the return of Donald Trump to the White House.

Unfortunately, there are some good reasons why this is a tightly fought election. First, the cold truth is that Kamala Harris is not an inspiring leader. What's even worse is that she is a flip-flopper. She's changed her position on [fracking](#) and on the infamous [border wall](#) (she is now against fracking natural gas bans and seems to be leaning in favor of building more border wall) and hasn't done enough to explain her policy positions on several issues, including Medicare for All. Rational voters would not fail to take notice of such shortcomings in a presidential candidate.

Second, Kamala Harris represents a party that has lost the [working class](#) and is perceived as being one with the elites. Harris' own campaign has been too focused on winning over wavering Republicans, preferring to share the stage with Liz Cheney and billionaire Mark Cuban over progressive icons like Sen. [Bernie Sanders](#) (I-Vt.) and Rep. Alexandria Ocasio- Cortez (D-N.Y.), and attacking Trump as a [threat to democracy](#).

Both strategies appear to have backfired. First, because working-class people represent a much larger segment of the electorate than wavering Republicans, and because cozying up to anti-Trump Republicans and receiving the endorsement of the warmongering [Cheneys](#) has alienated progressives. Second, exhorting citizens to vote for the Harris-Walz ticket because Trump represents a threat to democracy isn't making inroads with average folks who are mainly concerned with how to make ends meet. Most adult citizens have [no confidence in U.S. institutions](#) and in fact [mistrust the electorate system](#), which is why millions of citizens do not bother to vote and the [voter turnout](#) in the U.S. trails that of many other Western countries.

Third, Harris has not distanced herself from the Biden approach on [Israel and Gaza](#), which has been nothing short of a moral catastrophe, and has subsequently alienated the young, progressive and non-white voters who overwhelmingly sided with President Joe Biden in 2020. Not only that, but she and the Democrats have managed to create the impression among a large swath of voters that they are now the real warmongers, which is not far from the truth.

In the meantime, Trump's support has remained stable and defined in spite of what he says. Trump exerts a [cult-of-personality](#) influence over his followers like no other populist leader in the Western world. Of course, this is the result of the ongoing erosion of the political culture in the U.S. under neoliberalism, which has

essentially become the dictatorship of big financial capital. Neoliberalism is incomparable with democracy as it alters society's balance of power overwhelmingly in favor of big capital, transforms citizenship into an exercise of consumer choice, and undermines policy initiatives aimed toward the common good.

Neoliberalism must be understood not only as an economic project, but also as a political and cultural project. And nowhere else in the Western world is civil society's neoliberal transformation so pronounced as it is in the United States. Even the right to unionize, a fundamental human and civil right, faces massive challenges due to the political power of the corporate world. This is because [democracy in the U.S. has always been of a very fragile nature](#) and the consolidation of democratic ideals has faced resistance and opposition down to this day. Under such circumstances, the rise of the authoritarian strongman government that Donald Trump represents must be seen as an inevitable outcome.

Indeed, the unwavering appeal of Donald Trump among his supporters, in spite of all his crimes and scandals, speaks volumes both about the nature and scope of the [cultural divide](#) in the U.S., as well as about the political and economic effects of neoliberalism. This is the only way to understand why the white working class and less-educated voters, the traditional base of the Democratic Party, have flocked to Republicans in recent decades and now represent Trump's base. White working-class and less-educated voters broke ranks with the Democratic Party when the New Democrat faction severed completely its ties with the "New Deal" policies and embraced in turn economic policies that are the backbone of the neoliberal project.

By the same token, the old stereotype of the Republicans as the party of the rich and the elite no longer holds sway with many voters. And there is ample evidence to explain why this is the case. Virtually all of the [wealthiest congressional districts](#) across the country are now represented by a Democrat, while it is the Republicans who claim to represent the people who struggle.

In the end, it is probably not mind-boggling at all that election polls show a very close race between Kamala Harris and Donald Trump. In a recent Pew Research Center survey, more than [80%](#) of registered voters said that the economy is the most important issue for them in the 2024 presidential election. And in a final

[Financial Times](#) poll, voters expressed preference for Trump over Harris to lead the economy.

Of course, analyses that expose [Trump's myths about the economy](#) and warnings by experts that his own economic plans would [worsen inflation](#) and wreak havoc on [U.S. workers and businesses](#) while increasing the gap between the haves and the have-nots either do not reach his supporters or simply leave them unfazed. In either case, indifference to truth is a symptom of our extremely polarized times and, in a society that has lost its vision for the common good and has allowed in turn the rich to hijack the political system, all that matters now is that people believe in their own reasoning. Demagogues like Trump are fully aware of the existing social realities and not only exploit the available circumstances but make an art out of the belief that reality is what you make of it.

As sad as it may be, the 2024 presidential election is a choice between neoliberal fascism and neoliberal business as usual. Some would say there is still a difference between the two options; others might call it irredeemable politics. But these are the only two choices that U.S. voters have.

Source: <https://www.commondreams.org/opinion/neoliberal-fascism-election-2024>

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Which Countries Are On The Brink Of Going Nuclear?



*John P. Ruehl -
Independent
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10-31-2024 ~ *Global nuclear tensions are rising, emboldening Iran's ambitions and putting other nuclear-threshold nations on notice. As major powers posture, countries once cautious may now reconsider their restraint.*

Following Israel's October 26, 2024, attack on Iranian energy facilities, Iran vowed to respond with "[all available tools](#)," sparking fears it could soon produce a nuclear weapon to pose a more credible threat. The country's breakout time—the period required to develop a nuclear bomb—is now estimated [in weeks](#), and Tehran could proceed with weaponization if it believes itself [or its proxies](#) are losing ground to Israel.

Iran isn't the only nation advancing its nuclear capabilities in recent years. [In 2019](#), the U.S. withdrew from the Intermediate-Range Nuclear Forces Treaty (INF), which banned intermediate-range land-based missiles, citing alleged Russian violations and China's non-involvement. The U.S. is also [modernizing its nuclear arsenal](#), with [plans to deploy nuclear weapons](#) in more NATO states and proposals to extend its nuclear umbrella [to Taiwan](#).

Russia, too, has [intensified its nuclear posture, expanding nuclear military drills](#) and [updating its nuclear policies on first use](#). In 2023, it [suspended participation](#) in the New START missile treaty, which limited U.S. and Russian deployed nuclear weapons and delivery systems, and stationed nuclear weapons in Belarus [in 2024](#). Russia and China have also [deepened their nuclear cooperation](#), setting

China on a path to rapidly expand its arsenal, as nuclear security collaboration with the U.S. has [steadily diminished](#) over the past decade.

The breakdown of diplomacy and rising nuclear brinkmanship among major powers are heightening nuclear insecurity among themselves, but also risk spurring a new nuclear arms race. Alongside Iran, numerous countries maintain the technological infrastructure to quickly build nuclear weapons. Preventing nuclear proliferation would require significant collaboration among major powers, a prospect currently out of reach.

The U.S. detonated the first nuclear weapon in 1945, followed by the Soviet Union ([1949](#)), the UK ([1952](#)), France ([1960](#)), and China ([1964](#)). It became evident that with access to uranium and enrichment technology, nations were increasingly capable of producing nuclear weapons. Though mass production and delivery capabilities were additional hurdles, it was widely expected in the early Cold War that many states would soon join the nuclear club. Israel developed nuclear capabilities [in the 1960s](#), India detonated its first bomb [in 1974](#), and South Africa built its first [by 1979](#). Other countries, including [Brazil](#), [Argentina](#), [Australia](#), [Sweden](#), [Egypt](#), and [Switzerland](#), pursued their own programs.

However, the Non-Proliferation Treaty (NPT), enacted in 1968 to curb nuclear spread, led many countries to abandon or dismantle their programs. After the end of the Cold War and under Western pressure, Iraq [ended its nuclear program](#) in 1991, and South Africa, in a historic move, voluntarily dismantled its arsenal [in 1994](#). Kazakhstan, Belarus, and Ukraine relinquished the nuclear weapons they inherited after the collapse of the Soviet Union [by 1996](#), securing international security assurances in exchange.

Nuclear proliferation appeared to be a waning concern, but cracks soon appeared in the non-proliferation framework. Pakistan conducted its first nuclear test [in 1998](#), followed by North Korea [in 2006](#), bringing the count of nuclear-armed states to nine. Since then, Iran's nuclear weapons program, initiated in the 1980s, has been a major target of Western non-proliferation efforts.

Iran has a strong reason to persist. Ukraine's former nuclear arsenal might have deterred Russian aggression in 2014 and 2022, while Libya's Muammar Gaddafi, who dismantled the country's nuclear program [in 2003](#), was overthrown by a NATO-led coalition and local forces in 2011. If Iran achieves a functional nuclear

weapon, it will lose the ability to leverage its nuclear program as a [bargaining chip](#) to extract concessions in negotiations. While a nuclear weapon will represent a new form of leverage, it would also intensify pressure from the U.S. and Israel, both of whom have engaged in a cycle of escalating, sometimes deadly, confrontations with Iran and its proxies over the past few years.

An Iranian nuclear arsenal could also ignite a nuclear arms race in the Middle East. Its relations with Saudi Arabia remain delicate, despite the [2023 détente brokered by China](#), and Saudi officials have previously [indicated](#) they would obtain their own nuclear weapon if Iran acquired them. Saudi Arabia gave [significant backing](#) to Pakistan's nuclear weapons program, with the understanding that Pakistan could extend its nuclear umbrella to Saudi Arabia, or even [supply the latter](#) with one upon request.

Turkey, which hosts U.S. nuclear weapons [through NATO's sharing program](#), signaled a policy shift in 2019 when President Erdogan [criticized foreign powers](#) for dictating Turkey's ability to build its own nuclear weapon. Turkey's growing partnership with Russia [in nuclear energy](#) could meanwhile provide it with the enrichment expertise needed to eventually do so.

Middle Eastern tensions are not the only force threatening non-proliferation. Japan's renewed friction with China, North Korea, and Russia over the past decade has intensified Tokyo's focus on nuclear readiness. Although Japan developed a nuclear program [in the 1940s](#), it was dismantled after World War II. Japan's [breakout period](#), however, remains measured in months, but [public support for nuclear weapons](#) remains low, given the legacy of Hiroshima and Nagasaki, where nuclear bombings in 1945 killed more than 200,000 people.

In contrast, [around 70 percent](#) of South Koreans support developing nuclear weapons. South Korea's nuclear program began in the 1970s [but was discontinued](#) under U.S. pressure. However, North Korea's successful test in 2006 and its severance of [economic, political, and physical links](#) to the South in the past decade, coupled with the [abandonment of peaceful reunification](#) in early 2024, has again raised the issue in South Korea.

Taiwan pursued a nuclear weapons program in the 1970s, [which similarly ended](#) under U.S. pressure. Any sign of wavering U.S. commitment to Taiwan, together with China's growing nuclear capabilities, could prompt Taiwan to revive its

efforts. Though less likely, territorial disputes in the South China Sea could also motivate countries like Vietnam and the Philippines to consider developing nuclear capabilities.

Russia's war in Ukraine has also had significant nuclear implications. Ukrainian President [Volodymyr Zelensky](#) recently suggested to the European Council that a nuclear arsenal might be Ukraine's only deterrent if NATO membership is not offered. Zelensky later [walked back his comments](#) after they ignited a firestorm of controversy. Yet if Ukraine feels betrayed by its Western partners—particularly if it is forced to concede territory to Russia—it could spur some factions within Ukraine to attempt to secure nuclear capabilities.

The war has also spurred nuclear considerations across Europe. In December 2023, former German Foreign Minister Joschka Fischer [endorsed a European nuclear deterrent](#). A Trump re-election could amplify European concerns over U.S. commitments to NATO, with France having increasingly proposed an independent European nuclear force [in recent years](#).

Established nuclear powers are unlikely to welcome more countries into their ranks. But while China and Russia don't necessarily desire this outcome, they recognize the West's concerns are greater, with [Russia doing little](#) in the 1990s to prevent its unemployed nuclear scientists from aiding North Korea's program.

The U.S. has also previously been blindsided by its allies' nuclear aspirations. U.S. policymakers underestimated Australia's determination to pursue a nuclear weapons program in the [1950s and 1960s](#), including covert attempts to obtain a weapon from the UK. Similarly, the U.S. was [initially unaware](#) of France's extensive support for Israel's nuclear development in the 1950s and 1960s.

Smaller countries are also capable of aiding one another's nuclear ambitions. [Argentina offered considerable support to Israel's program](#), while Israel assisted [South Africa's](#). Saudi Arabia financed Pakistan's nuclear development, and [Pakistan's top nuclear scientist](#) is suspected of having aided Iran, Libya, and North Korea with their programs in the 1980s.

Conflicts involving nuclear weapons states are not without precedent. Egypt and Syria attacked nuclear-armed Israel in 1973, and Argentina faced a nuclear-armed UK in 1982. India and China have clashed over their border on several occasions, and Ukraine continues to resist Russian aggression. But conflicts

featuring nuclear countries invite dangerous escalation, and the risk grows if a nation with limited conventional military power gains nuclear capabilities; lacking other means of defense or retaliation, it may be more tempted to resort to nuclear weapons as its only viable option.

The costs of maintaining nuclear arsenals are already steep. In 2023, the world's nine nuclear-armed states spent an estimated [\\$91.4 billion](#) managing their programs. But what incentive do smaller countries have to abandon nuclear ambitions entirely, especially when they observe the protection nuclear weapons offer and witness the major powers intensifying their nuclear strategies?

Obtaining the world's most powerful weapons may be a natural ambition of military and intelligence sectors, but it hinges on the political forces in power as well. In Iran, moderates could counterbalance hardliners, while continued support for Ukraine might prevent more nationalist forces from coming to power there.

Yet an additional country obtaining a nuclear weapon could set off a cascade of others. While larger powers are currently leading the nuclear posturing, smaller countries may see an opportunity amid the disorder. The limited support for the [Treaty on the Prohibition of Nuclear Weapons](#), in effect since 2021, as well as the breaking down of other international treaties, reinforces the lingering allure of nuclear arms even among non-nuclear states. With major powers in open contention, the barriers to nuclear ambitions are already weakening, making it ever harder to dissuade smaller nations from pursuing the ultimate deterrent.

By John P. Ruehl

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Source: Independent Media Institute

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The U.S. Southwest Offers Blueprints For The Future Of Wastewater Reuse



10-31-2024 ~ *Our existing water supplies could go further by turning wastewater into drinking water.*

No country is immune from water scarcity issues—not even wealthy countries like the United States.

Population growth and climate change are stretching America’s water supplies to the limit, and tapping new sources is becoming more difficult each year—in some cases, even impossible.

The Southwestern states, in particular, have faced [“intense” droughts during the 21st century](#), and traditional water supplies are failing. As groundwater supplies in the region have depleted substantially, rainfall has decreased, and water import costs have risen substantially. According to a September 2022 [Nature article](#) about the water situation in the Southwest, there is a “very low chance for regional mega-reservoirs to regain full-capacity levels assuming current demand.”

The region looks to the Colorado River as its plumbing system, which currently provides drinking water to [1 in 10 Americans](#)—all while irrigating nearly [5.5 million acres of land](#). But [it’s also being stretched to its limits](#): Population growth and expansive development are increasing agricultural demands. Meanwhile, the pressure to ensure sufficient water is left in the environment to support ecosystems has accelerated. [According to a December 2012 study](#) by the U.S. Department of the Interior Bureau of Reclamation, the demands on the Colorado River are expected to exceed supply by 2040.

On top of this, each state has vastly different needs. For example, Nevada's needs are largely urban, but Arizona and California require water for huge agricultural and urban sectors. Each year, states [argue over](#) who has the superior right to water supplies. And once they have their allocation, districts frequently end up in litigation over their allotment. There is always a shortage of water, raising questions about who is responsible and how best to mitigate the water crisis.

In 2023, the depleting water levels in the river created a "crisis after decades of overuse." The seven states that depend on the Colorado River for water and power had to agree to reduce their water usage to ensure the river was still flowing. "Three states—Arizona, California, and Nevada—have agreed on a plan to conserve at least 3 million acre-feet of water by 2026—roughly the equivalent to the amount of water it would take to fill 6 million Olympic-sized swimming pools," [reported](#) NBC in May 2023.

While demand is increasing, climate change has damaged supply—and the impact is twofold: As less water comes down the Colorado River, people are using more water due to increased temperatures.

Simply put, there is only so much water.

"When you can't make the pie bigger, and you're fighting over a finite supply, it's a misery index, just an allocation pain for all parties," says Brad Herrema, a lawyer specializing in water law and natural resources.

"But if you can make the pie bigger, there's less fighting."

Turning Wastewater Into a Resource

Our existing water supplies must be expanded, and the technology exists to do this by turning wastewater into drinking water. This is not a new science, but the practice has evolved significantly in the past 50 years.

In the 1960s, water availability became problematic in rapidly growing areas in the U.S., and water managers began to consider using wastewater to augment supplies. Several water reuse projects were [built](#) in the following decades in California, Virginia, Texas, and Georgia, but larger developments in the 1990s were met with opposition. "[Toilet to tap](#)" narratives in the media [fed misperceptions](#) regarding the treatment process, which helped to dismantle public support for these projects. What "toilet to tap" misses is membrane

filtration, as of 2024, is membrane desalination, [ozone, and advanced oxidation](#), to name a few treatment options that make the purified water entirely safe to drink.

However, advances in these technologies associated with water reuse helped boost confidence in and acceptance of the practice among water professionals in the early 2000s. Now, water reuse is entering the mainstream.

[Almost half of all](#) the potable reuse projects built in California since the first in 1962 [were installed between 2009 and 2023](#), with several more on the horizon. With [more potable reuse projects](#) than any other state, California plans to use 2.5 million acre-feet of water per year (AFY) by 2030.

According to [a document](#) by the Environmental Protection Agency and CDM Smith Inc., potable reuse also makes up “a significant portion” of the nation’s water supply once de facto reuse is factored in.

What’s clear is that some major U.S. cities are already delivering recycled wastewater to consumers on a massive scale and expanding the pie. However, how a municipality can recycle wastewater depends largely on the area’s geography, financial resources, and, perhaps most importantly, the public’s attitude.

Las Vegas

Las Vegas [recycles](#) nearly all of its water used indoors, giving it a virtually inexhaustible supply of water for domestic consumption. The city benefits from its unique geography. [Almost 90 percent](#) of southern Nevada’s water is taken from Lake Mead, which lies on the Colorado River. It is then treated and run through the city’s system. After it’s flushed or drained, the water makes its way to a wastewater treatment plant before it’s [discharged](#) into the Las Vegas Wash. From there it makes its way to Lake Mead where it is either drawn back out or stays in the river, ensuring there’s enough water for cities downstream of Vegas.

One key element that makes Vegas’s reuse system so effective is “the Wash,” a 12-mile-long channel that [acts](#) “as the ‘natural kidneys,’ cleaning the water that runs through them by filtering out [any] harmful contaminants” on its way back to Lake Mead. Thanks to the Wash, when the water is withdrawn again, it does not need to undergo a costly process of advanced treatment; instead, it undergoes basic drinking water treatment.

Another critical factor in Vegas's success is that for every gallon of water the city puts into Lake Mead, it can take a gallon back out—meaning the city is essentially recycling its indoor water in a closed loop. This is [known](#) as de facto water reuse.

Nevada is allocated [300,000 AFY](#) of water from the Colorado River each year. Bronson Mack, public information officer with the SNWA, says that in 2019, the city actually diverted 490,000 AFY of water from the Colorado River but only consumed 234,000 AFY. About 256,000 AFY was returned to the lake.

“Our return flow credits system is unique,” says Colby Pellegrino, deputy general manager of resources for SNWA. “Once we return the water to Lake Mead, we’re not charged for that water. We’re only charged for the total we depleted.”

Mack adds that local water utilities were paying \$313 for treatment and delivery of 1 acre-foot of water as of 2020, and [passing that cost on to the consumer](#). If Vegas could not return such a large proportion of its water, that cost would rise dramatically.

De facto reuse is also vital for a city that can't afford to gamble on the weather—Las Vegas is the driest city in the U.S. When the Colorado River produced only [25 percent of its usual supply](#) in 2002, the city was struck by drought, but its citizens still had unlimited access to indoor water.

“Vegas couldn't exist without [the] return flow credits approach,” says Daniel Gerrity, principal research scientist at SNWA. “Without that, we'd have already maxed out.”

Despite a wet winter in 2023 and an improvement in the water levels in lakes, “Southern Nevada's water supplies from the Colorado River at Lake Mead remain under shortage reductions,” [points out](#) Southern Nevada Water Authority, warning that “The risk of shortage remains high in future years.”

Meanwhile, not every city has a Lake Mead or a Wash. For places without Vegas's luck, there are other ways to ensure water reuse.

Orange County, California

[Orange County Water District](#) (OCWD) is a world leader in water reuse. Since 2008, it has provided drinking water to [2.5 million people](#)—in a region with [no more than 15 inches](#) of annual rainfall—through its [Groundwater Replenishment](#)

[System](#) (GWRS) project. This project has helped highlight the effectiveness of IPR, giving other providers a model to emulate and providing the full-scale data that was previously missing to evaluate the viability of the process.

The water reused through GWRS would have otherwise been discharged into the Pacific Ocean. By keeping it in the system, there is less reliance on the Colorado River, easing the strain on its supplies.

The city utilizes a process called indirect potable reuse (IPR). In the absence of an environmental filtration process like the Las Vegas Wash, Orange County's wastewater has to undergo advanced treatment before it is pumped to a groundwater basin. From there, it is pumped to the consumer via a standard drinking water treatment train, making it safe to consume and completing the cycle. The process not only turns wastewater back into a resource but also saves massively on the cost of pumping Colorado River water from hundreds of miles away.

GWRS, which is a joint project of OCWD and the [Orange County Sanitation District](#) (OCSD) "accounts for approximately 35 percent of water demands," [according](#) to OCWD, and its wastewater treatment capacity was further expanded in 2023 from [100 to 130 million gallons per day](#). This is "enough to fill nearly 200 Olympic-sized pools and enough for a million people," [according](#) to a 2023 article by the Daily Pilot.

"Orange County is the benchmark [for] water reuse system," says Gerrity. Water managers from around the world visit OCWD to learn how they've managed such success.

Like so many regions innovating in water reuse, drought forced their hand. [In 1975](#), "[a]s imported water supplies became less available, another source of water was needed to fight seawater intrusion. In April 1975, OCWD unveiled... [a facility that] took treated wastewater from the... OCSD, blended it with deep well water and injected it into... [a basin]. In 1977, [OCWD became]... the first in the world to use reverse osmosis to purify wastewater to drinking water standards."

The project was expanded in line with the demand in the '90s, and the GWRS, which has been operational since 2008, is now the world's largest advanced water purification system for potable use. "The largest reuse facility in the world can now treat nearly 500 million liters of secondary wastewater a day," [points out](#) the

nonprofit Water Reuse Europe.

And through it all, OCWD managed to swerve the “toilet to tap” attacks that had [ruined public support](#) for such projects in other areas of California.

How?

“People expect to find out that our success is grounded in some secret technology, but they find out it’s all about education, education, education,” says Rob Thompson, general manager at OCSD, which [treats](#) the water before sending it to the basin managed by OCWD. “Bringing the public on board with drinking [recycled] wastewater takes a lot of outreach. Getting over the ‘yuck factor’ is everything. We had to speak with NGOs, governors, the authorities, politicians—you name it—we spoke to them. Once you have enough people on board, everyone starts to think it must be okay.”

“People have high expectations about the quality of their water and have a lot of questions,” adds Megan Plumlee, who heads OCWD’s research and development department. “We explain to the public what we’re doing and how it’ll benefit the district, retailers, and community.”

Following OCWD’s lead, San Diego embarked on a [massive multi-year potable reuse project](#) that planners say will provide nearly 50 percent of the city’s water supply locally by the end of 2035. Indeed, sometimes a new process takes hold only because of a leader in the field who shows the way and proves something can be done safely on a large scale.

“We weren’t the first to try it, but we were the first to succeed on such a massive scale. That’s because we were the first to really embrace education. Now others are doing the same,” says Thompson.

Now, [16 states have developed regulations](#) that allow for IPR, with several more IPR projects on the horizon that will help bolster water supplies—all without putting additional pressure on the Colorado River.

Another more efficient water reuse method has yet to take hold in the U.S., though it may soon find its leader.

San Diego

Direct potable reuse (DPR) was labeled the final frontier of water reuse by G.

Tracy Mehan, the executive director for government affairs at the American Water Works Association (AWWA), in a November 2019 Opinion piece [published](#) in the Scientific American. The process does away with an environmental buffer and pumps wastewater directly through an advanced treatment train before it is purified and put straight back into the system in a matter of hours.

Given this reality, DPR can deliver water more [efficiently and cost-effectively](#) by using existing infrastructure and without needing to build expensive and energy-intensive pipelines to a reservoir or groundwater basin. DPR can also allow for more water to be recycled than IPR as there are no limitations on the reservoir or groundwater basin.

Additionally, DPR avoids regulations on putting water back into the environment by eliminating the buffer. And finally, DPR [can be more reliable and efficient](#). Jeff Mosher, vice president and principal technologist at Carollo Engineers, a leading firm in engineering water reuse systems, explains that DPR can turn wastewater into drinking water in a matter of hours, faster than IPR or any other reuse method.

As of early 2023, only one facility in the U.S. is currently equipped to operate DPR. Big Spring in West Texas identified DPR as the most feasible way to address an urgent need to diversify the city's water portfolio and increase its supply reliability for when rains fail to fill the city's reservoirs—[the project serves around 135,000 people](#), according to a 2019 article published in the Journal of Environmental Planning and Management.

The Colorado River Municipal Water District (CRMWD) in Big Spring began operating this plant in 2013. It could treat up to 2 million gallons per day of wastewater effluent to drinking water standards, providing a much-needed water supply amid punishing droughts.

However, DPR has yet to become a mainstream and trusted water supply system, and it remains unused beyond times of crisis and for larger communities.

Arizona and Florida are in the process of [developing](#) their DPR regulations while California and Colorado already have these regulations in place. However, most states have yet to consider implementing this technology, mainly due to a [lack](#) of public acceptance. [The speed at which DPR recycles wastewater](#) makes it particularly vulnerable to “toilet to tap” attacks, and this has consumers

concerned, who worry over the small room for error and the “yuck factor.”

An attempt to introduce potable reuse in [San Diego in the 1990s failed](#) after fears of “drinking sewage” diminished trust in the project and fostered uncertainty about the safety of the water. Fast-forward 12 years to 2011, a rebranded project, Pure Water San Diego, did things differently.

A 2012 survey carried out by the San Diego County Water Authority [found](#) that 73 percent of the respondents either strongly or somewhat favored “advanced treated recycled water as an addition to the supply of drinking water.” This figure was an improvement from the 2011 survey.

San Diego has changed its mind, and now it [may one day](#) do what OCWD has done for IPR and pave the way for DPR use on a broader scale.

With lessons learned from OCWD, outreach helped bring the community on board in San Diego. “We had to educate the community on the concept [of potable reuse],” Amy Dorman, assistant director at [San Diego’s Pure Water program](#), says. “We ran focus groups with the community, made ourselves flexible moving forward, and recognized the importance of listening to the community. In the ‘90s, there was not the right amount of education. Now it’s comprehensive. We do tours, presentations, websites, mailers and [identify] all stakeholders—[ensuring] diligent and constant outreach.”

Dorman explains that 18,665 San Diegans have visited the demonstration facility as of 2021, while the team at Pure Water has spoken to almost 30,000 children in schools. They explain that [50,000 lab tests](#) have been carried out on the water supply as of 2020, each meeting every regulatory standard and producing exceptional water quality—typical tap water is actually less highly treated than DPR tap water.

However, the key statistic is that [85 to 90 percent of San Diego’s water is already imported](#) from the Colorado River and Northern California Bay-Delta. In fact, because the city is downstream, Dorman says the water has already been recycled [49 times](#) by other water districts before reaching San Diego. She says this usually quells fears that drinking recycled water is unsanitary since, as it turns out, this has been happening for years.

“What we know now is that it’s possible to convince people,” adds Mosher. “We

have proven that every community you go into that has concerns, you can overcome.”

San Diego hopes that by 2035, a [third of the city's water supply](#) will come from locally supplied, recycled wastewater instead of importing the majority of it.

For phase one, the Pure Water San Diego program—funded by the San Diego government—will use IPR to [provide the city with 30 million gallons](#) of water per day, utilizing the nearby Miramar Reservoir as an environmental buffer in a similar way to how Orange County uses its groundwater basin. “San Diego’s Pure Water treatment system will be operational and providing 7 million gallons of water a day to residents by 2026,” says a January 2024 KPBS article.

Phases two and three will target [an additional 53 million gallons](#) of water per day by 2035. In the absence of a groundwater basin and large enough reservoirs, Pure Water San Diego plans to employ DPR to realize the project’s full scale.

Mosher says that cities with plans to do DPR one day don’t want the attention to be the ones to take the plunge into doing it on a large scale. But with projects on the horizon in San Diego and [El Paso, Texas](#), Mosher expects greater faith in the process by 2030. A [2011 public opinion poll shows](#) that citizens are 50 percent more likely to accept recycled water when they learn that other communities have done so already.

Without a leader in the field, cities interested in doing DPR may hesitate, but Gerrity is positive about the impact San Diego can have countrywide.

“It’s a good platform to go forward,” he says. “We have more options for facing water scarcity, another tool in the toolbox to tap into. Conservation, potable reuse [and] innovative technologies all extend supply and give high-quality drinking water to the public.”

Mainstreaming Potable Reuse

While water reuse is breaking into the mainstream, there are still challenges going forward.

It is not simply a matter of copying Las Vegas, Orange County, or San Diego. A region’s geography and finances often dictate a city’s water supply, which significantly impacts what kind of reuse that city can attempt. De facto reuse, as

in Las Vegas, is incredibly site-specific and requires the geography of an area to substitute for advanced treatment, while the most successful IPR projects rely on large groundwater basins and nearby reservoirs.

Both types of potable reuse are also incredibly expensive. While they may save money in the long term, they require a huge initial investment.

The federal government needs to step in to support water recycling projects. Taking a step in this direction, the Biden administration provided almost \$100 million for the Pure Water Southern California facility. “Water recycling is an innovative and cost-effective tool that can help make our water supplies more reliable, helping communities find new sources to meet their needs today, but most importantly to meet our needs in the future,” [said](#) Reclamation Commissioner Camille Calimlim Touton in May 2024.

Working out what works best for one community is half the battle. Thanks to the geographical nuances that help potable reuse or de facto reuse work, there is no one-size-fits-all.

“You could take what Orange County does, and it’s going to work, but the question is whether that is the best approach for that location. So, the challenge is, now that we feel comfortable with one approach, can we do it a different way?” says Gerrity.

Mosher is trying to compile all the information on water reuse into an easy-to-read guidance document that cities considering the process can use to decide which approach may be best for them.

“It’s about getting to a point where communities who want to try DPR don’t feel overwhelmed,” says Mosher.

What’s clear is that the Colorado River can no longer be relied upon to meet the water needs of an increasing population. If we continue asking so much of it, we have to start easing those pressures. Water reuse is imperative if the driest parts of the world continue growing without destroying the environment that relies as much on water as we do.

By Freddie Clayton

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BRICS Is Mounting A Challenge To The US-Led World Order — But For Whom?



C.J. Polychroniou

10-25-2024 ~ *Brazil, Russia, India, China and South Africa held a summit to counter the unipolar power of the US and Europe.*

The recently concluded [2024 BRICS](#) (an acronym for the combined economies of Brazil, Russia, India, China and South Africa) [summit](#), hosted by Russian President Vladimir Putin in Kazan and attended by scores of Global South leaders, including Chinese President Xi Jinping, Indian Prime Minister Narendra Modi, South African President Cyril Ramaphosa and Iranian President Masoud Pezeshkian, was the largest diplomatic forum in Russia since Putin ordered troops into Ukraine in 2022. With 36 countries attending, and more than 20 of them represented by heads of state, the three-day BRICS bloc of developing economies summit showed that Russia is anything but isolated on the global stage. The meeting highlighted the current geopolitical situation, the sanctions imposed by the United States on China, Russia and Iran, which all participants condemned as “unlawful,” and the need for an alternative payment system. The promotion and development of alternative financial instruments to gain greater independence from the dollar is perhaps the most important concern of the BRICS grouping. Yet no concrete resolutions were made at the 2024 BRICS summit.

Still, there is much more to be read into the 2024 BRICS summit than a big diplomatic win for Putin over Russia’s invasion into Ukraine, which is how most of the [mainstream corporate media](#) opted to frame the summit. First, since Putin’s rise to power, multipolarity has been a central focus of Russia’s foreign policy agenda, as it is seen as a counterweight to the global hegemony of the U.S. and its allies. Beijing’s emphasis under the leadership of Xi Jinping is also on building a multipolar world. And more and more countries in the Global South are looking to geopolitical alliances to escape influence and economic dependence on the United States and Europe.

BRICS countries say they seek to provide an alternative to the Western-led world order as they believe it is unfair, inequitable and exploitative. And the grouping has been gaining in strength, size and significance. It is estimated that BRICS countries account for [35 percent of the world economy](#) and 45 percent of the population. In fact, not only have the BRICS countries’ share in world GDP overtaken that of G7, but the world economy relies increasingly on the emerging economies to drive expansion, according to the [IMF](#).

At the present time, the BRICS includes 10 countries — Brazil, China, Egypt, Ethiopia, India, Iran, Russian Federation, Saudi Arabia, South Africa, United Arab Emirates — but more than 30 countries have expressed interest in joining, including NATO-member [Turkey](#).

This development speaks volumes of the rising Global South discontent with the U.S.-dominated international order and of the increasing realization on the part of so many people across the non-Western world that Washington has no interest in peace, fairness and justice, and that the U.S. is in fact edging back toward a unipolar world. That said, we need however to distinguish the discontent of the Global South population with the dominance of the United States from the grievances that the ruling classes of these nations express about the current world order, as their own self-preservation is what is of paramount importance to them.

There is little doubt that the Biden administration's hawkish line on Russia, waging a proxy war in Ukraine, seeking NATO's expansion, pursuing the strategic encirclement of China with the building of defense alliances in the Indo-Pacific (Japan, Australia, South Korea, the Philippines and Thailand) and backing Israel's constant use of brute force in the Middle East while "[shielding Netanyahu against the reach of international justice](#)," as historian Adam Tooze aptly put it in a recent op-ed in the *Guardian*, are all part of a U.S. bid to reassert unipolar global hegemony.

The U.S. is on decline, but it won't go down without a fight. Too much has been invested in a Western-dominated world order, and the U.S. still possesses the world's top military. Revealing the mindset of political leaders in Washington D.C., from both parties, to be sure, [Kamala Harris](#) said during her keynote address at the Democratic National Convention that "as commander-in-chief, I will ensure that America always has the strongest, most lethal fighting force in the world."

The question here is whether BRICS can usurp the U.S.-led world order. To do so, the BRICS nations would have to overcome the challenges of economic integration and deepen financial cooperation. Undoubtedly, greater collaboration and stronger coordination among BRICS countries are both possible and have in fact seen significant progress over the years. The [share of global trade](#) among the group's current members more than doubled, to 40 percent, from 2002 through 2022.

However, becoming a global economic integration project, with a common currency, which is the kind of necessary step BRICS would have to take to truly go toe-to-toe with the U.S., is simply not in the cards at the present juncture or

even in the foreseeable future.

Indicative of the difficulties surrounding the vision of a global economic integration project, so far only Brazilian President [Lula](#) has come out in open support for the creation of a common currency for trade and investment between BRICS economies. Putin, for example, is in favor of switching trade between member states away from the dollar to national currencies. But even if a common BRICS currency was to be created, there is no guarantee that it would replace the U.S. dollar. Even the euro has not succeeded in supplanting the dollar although a common BRICS currency would surely weaken the power of [U.S. sanctions](#), which, interestingly enough, have gained more prominence as a tool of U.S. foreign policy during the last couple of decades.

Finally, given the huge differences in the form of governance that exists among BRICS member states (China is a one-party state with a mixed economy; India is a competitive-authoritarian hybrid; Iran is a theocracy; United Arab Emirates is a monarchy) there is no realistic prospect of BRICS turning into a political and security alliance against a U.S.-led NATO. Perhaps this explains the position of leaders like India's [Modi](#), who stated at the recently held summit of emerging economies that BRICS must not be seen as anti-West or even as an alternative to global organizations. A few days ahead of the summit, even [Putin](#) himself asserted that the BRICS grouping is not "anti-West," but just "non-West."

Be that as it may, Chinese President [Xi Jinping](#) is absolutely spot-on when he said at the 2024 BRICS summit that "[the world is undergoing a major change that has not been seen in a century and the international situation is changing and chaotic.](#)" Both Xi Jinping and Vladimir Putin seem to be firm in their convictions that the world must shift toward multipolarity, although the belief that multipolarity in a capitalist universe will deliver a fairer and safer world is simply not true, as history has shown. At the same time, they appear to be fully aware of the ugly fact that the U.S. will try to remain at the top of the global power hierarchy by any means necessary.

Indeed, to take one very recent example, how could international law and justice prevail when the U.S. labels the charges of the International Criminal Court against Israeli leaders "shameful" and "outrageous" but justifies similar charges against Putin? It is such hypocrisy and the plundering of international order by Western states, with the U.S. at the helm, that have led many leaders in the

Global South calling for a new form of multilateral cooperation. For many of those nations, creating an alternative world order may indeed be a necessary step for their very survival. Whether such a vision will materialize or not, only time will tell.

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Why Is Prehistory Inspiring So Many Artists?



Yann Perreau - Human Bridges

10-25-2024 ~ *What draws us to such a distant and long-gone time?*

A fruitful relationship has always existed between prehistory (a scientific discipline constantly refreshed by new discoveries) and the visual artists who interpret it.

Prehistory is a modern idea. The word was “[coined](#)” only in the 1830s. Before the 19th century, we didn’t know much about dinosaurs or cavemen, and fossils remained a scientific curiosity. When French naturalist Georges-Louis Leclerc, Comte de Buffon published his notorious [Histoire naturelle](#) (1749-1788), suggesting that nature had a history and proposing the first reproduction theory, the faculty of theology at the Sorbonne University in France condemned it and threatened him with repercussions. He eventually had to publish a retraction.

Similarly, when Charles Darwin (1809-1882) published his [On the Origin of Species](#) (1859), his compatriots in the United Kingdom and Europe still believed that God made man “in his own image,” as stated in the Bible ([Genesis 1:27](#)). Anyone claiming that all animals came from the same origin, and apes were somehow our distant cousins, was considered a fool or a heretic.

Then the first caves were excavated revealing extensive and intricate artwork on their walls. In 1879, archeologist Marcelino Sanz de Sautuola explored a new

cave in Altamira, northern Spain, and brought his young daughter, Maria, with him. She spotted vivid depictions of bison and masterfully painted scenes on the cave's ceiling. These cave paintings were initially dismissed as forgeries, as scholars of the time, with the positivist mindset, [could not imagine that people from the Paleolithic were sophisticated enough](#) to produce such complex artworks. By the early 20th century, however, as archaeologists uncovered more ancient skeletons, bones, fossils, and early human art in caves and other sites, their discoveries started to raise curiosity beyond the scientific community. Writers, intellectuals, and the public were captivated by these glimpses into our distant past.

Artists were intrigued, sometimes amazed by the mind-blowing quality of parietal art, indecipherable, complex abstract shapes and objects, and what was perceived as scenes depicting animals and humans in rituals or sacrifices. The drawings, paintings, and etchings that endlessly decorated the walls, ceilings, and floors of caves in subtle colors were often mesmerizing. Picasso was particularly inspired by various prehistoric elements, as the 2023 exhibition [No Past in Art: How Prehistory Inspired Picasso's Work](#) at the Musée de l'Homme in Paris showed. Gauguin, Cézanne, and later the symbolists and primitivists, also dedicated various paintings and sculptures to what they perceived as representations of our origins, rituals, and myths.

Prehistory has never stopped inspiring artists since then, captivating the most important modern art figures like Jean Arp, Giorgio de Chirico, Max Ernst, Alberto Giacometti, Paul Klee, Joan Miró; Joseph Beuys, Louise Bourgeois, Jean Dubuffet, Marguerite Duras, Barbara Hepworth, Yves Klein, and Robert Smithson. It continues to be an inspiration among our contemporaries, including Dove Allouche, Miquel Barceló, Tacita Dean, Marguerite Humeau, Pierre Huyghe, and Giuseppe Penone, to name just a few, whose works were showcased during the 2019 exhibition, *Préhistoire, une énigme moderne* ([Prehistory, a Modern Enigma](#)).

This landmark exhibition, which took place at the Pompidou Center in Paris, inspired me and initiated my interest in prehistory. It is not the first museum show dedicated to the topic: fossils, artifacts, and artworks discovered in caves, as well as tools, ornaments, and sculptures made from natural rocks, have been exhibited in major art institutions since the end of the 19th century.

Most of these exhibitions have already created fruitful dialogues between the past

and present and parietal art and its representation by contemporary artists. When it opened its Gallery of Comparative Anatomy and Paleontology in 1898, the National Museum of Natural History in Paris commissioned the sculptor Emmanuel Frémiet and the painter Fernand Cormon to create a vast decorative program. [*Prehistoric Rock Pictures in Europe and Africa*](#) at the Museum of Modern Art (MoMA, New York, 1937) showed monumental surveys of cave paintings with a selection of contemporary works by Miró, Klee, and Ernst, among others, in echo. “That an institution devoted to the most recent in the art should concern itself with the most ancient may seem something of a paradox,” MoMA’s founding director Alfred H. Barr Jr. wrote in his preface to the exhibition catalogue. “Yet, for Barr, this past had already influenced modern art, and could potentially offer museum visitors a prehistoric pedigree for it,” [states](#) the MoMA website. Another major exhibition, [*40,000 Years of Modern Art*](#), organized by Herbert Read and Roland Penrose at the Institute of Contemporary Arts in London in 1948, mixed prehistory and non-Western art with surrealist, expressionist, and abstract works.

But there is a major problem, particularly, concerning the so-called “primitive art,”—a highly contested term now. The clichés and stereotypes that this notion implies were also abundant in the early “scientific” literature dedicated to our ancestors. The first paleontologists were poisoned by plain racist prejudices, [explains](#) paleo artist and author [Mark P. Witton](#) in his 2020 blog. George Cuvier (1769–1832), the father of vertebrate paleontology whose famous taxonomy incorporated both fossils and living species, “viewed whites as the pinnacle of creation, but Blacks as ugly, barbaric persons of monkey-like appearance,” writes Witton. “His work on dividing humans into ‘scientifically validated’ races was instrumental in later attempts at biological justifications of racism.”

In the United States, the influential president of the American Museum of Natural History (AMNH) Henry Fairfield Osborn (1857–1935) was a supporter of Hitler. He exploited his research to promote racist and eugenicist ideas, [points out](#) Witton. Osborn commissioned one of the earliest depictions of prehistoric life, Charles Knight’s mural “Neanderthal Flintworkers” (1924), hung in AMNH’s Hall of the Age of Man. Many of Osborn’s contemporaries, including Margaret Mead, were [troubled by the racist character of the imagery](#). The faces and looks of the Neanderthal men and women depicted in this iconic—though controversial and scientifically incorrect work—were inspired by features of non-white peoples,

instead of being deduced from their bones.

A Eurocentric mindset has continued to characterize the collective representation of prehistory until recently, sometimes reducing it to a more subtle form of “primitive art.” In 1984, MoMA dedicated a survey exhibition to “*Primitivism*” in *20th Century Art*. MoMA bragged about being the first institution to “juxtapose modern and tribal objects in the light of informed art history.” But the exhibition omitted dates of the Indigenous works and explanations of their functions, as art historian Thomas McEvilly remarked in his [Artforum review of the show](#). He criticized *Primitivism in 20th Century Art* as expressing “Western egotism still as unbridled as in the centuries of colonialism and souvenirism.” Since then, the museum has made its *mea culpa*, addressing the [controversy](#) on its website.

The Pompidou exhibition’s three curators, Cécile Debray, Rémi Labrusse, and Maria Stavrinaki, [write on the museum website](#) that *Primitivism in the 20th Century Art* did not include prehistory “which, in fact, is fundamentally different from it. For the modern Western world, the ‘primitive’ is generally rooted in specific cultures, usually described as exotic; the question of temporality is secondary to its geographical and cultural otherness. Prehistory, on the other hand, is seen above all as an indefinitely stretched time span, and thus largely indecipherable (whether in terms of nature or the first human cultures).” Labrusse [dedicated a book to this paradoxical situation](#). “Prehistory is precisely what is *pre*, meaning *out of* history,” he told me in an interview in October 2024. It “radically overturned our dream of mastering linear time, as 19th-century historicism chose to formulate it.” Here lies the paradox that attracts so many artists to prehistory, according to Labrusse: “Because it is largely indecipherable (whether in terms of nature or the first human cultures), it remains fascinating.”

From *Prehistory, a Modern Enigma*, I remember the scenography. Tall walls, obscure corridors, grandiose frescos, and a prehistoric cave reconstituted at the center of it. In this spectacular setting, amid fossils, Cro-Magnon skulls, tools, and Paleolithic carvings, there were more than 300 works of art by modern and contemporary artists. Plus elements of popular culture: surveys of archaeological excavations, advertisements, and extracts from books (*The Quest for Fire*, a hugely popular Belgian 1911 fantasy novel) and cult films such as *The Lost World* (1925), *King Kong* (1933), or *2001: A Space Odyssey* (1968). This undertone in the exhibitions shows what the curators of the Pompidou exhibition [describe](#) as the “invention of the concept of prehistory.” How artists and society have succumbed

to the appeal of origins in the modern era, “yielding to a fantasized vision of what came before history.”

The exhibition opened with Odilon Redon and Paul Cézanne, at the turn of the 20th century. Cézanne was an amateur student of geology and paleontology. He visited prehistoric caves and painted the rocks on the Mediterranean coast with his [close friend](#) Antoine-Fortuné Marion (1846–1900), who later became a noted geologist and paleontologist. The show also exposed the Venus of Lespugue, the famous prehistoric ivory statuette, [dated around 23,000 years ago](#), which inspired Picasso and Giacometti (both owned plaster casts of it). She stands there, in an exhibition room at the Musée de l’Homme, surrounded by bronzes from Matisse, Miró, and other modern artists who were equally fascinated by her and other statues from that time.

“Préhistoire, une énigme moderne” brilliantly demonstrated how prehistory inspired modernity, an artistic movement that was, paradoxically, about the future. Photos of the 1889 Paris World’s Fair show how the Eiffel Tower and various cutting-edge technologies were exhibited alongside Neanderthal skeletons. A Max Ernst painting of “petrified forests, glacialized landscapes, and sedimented earth,” created after World War I, raised questions about whether these were depictions “from after humanity, or before it?” as modernism developed toward “a prehistoric vision of time before humankind,” according to a 2019 New York Times [article](#).

This feeling got stronger with the tragedies of World War II when many intellectuals and artists turned their back on the notion of progress, digging in reverse into the beginning of life, extinct species, the first hominids, the lost cultures of the Paleolithic era, and the Neolithic revolution to grapple with the possibility of extinction, of earth without humankind. “Nourished by archaeological discoveries, but far from simply reflecting on them,... prehistory...[functioning] as a powerful machine for stirring up time,” [write](#) the curators. “This time machine constantly shapes the mental boundaries of modernity and provides concrete models for all sorts of experiments.”

The exhibition also explores the mysteries of shaped rocks and tools, an intimate relationship to animals, ecological issues, and apocalyptic wonder in chronological and thematic parcourse. These themes are part of the collective representation, the idea of what prehistory is and how the inspired artists, whose

works were exhibited, felt from Louise Bourgeois, Joseph Beuys, Lucio Fontana, Max Penck, Robert Morris, Robert Smithson in the 1980s, the Chapman brothers, Pierre Huyghe, Tacita Dean, Marguerite Humeau, Dove Allouche, Jennifer Allora and Guillermo Calzadilla, Jean-Pascal Flavien, and Bertrand Lavier in the last few years. “Prehistory is not an object given to artists to interpret; it is created by them” states Labrusse.

“I think artists are either Paleolithic or Neolithic. I am decidedly the latter [said](#) minimalist artist Carl Andre, according to the previously mentioned NYT article. His [Stone Field Sculpture](#) in Hartford, Connecticut, could have belonged to the Neolithic times. Painters and sculptors sometimes like to experiment with the artistic canons and the tradition of “getting back to our roots,” to the “early man,” as [a 2024 exhibition at the Hole Gallery](#) shows. “Based around an out-of-print anthology devoted to prehistoric collections unearthed by archaeological expeditions in Algeria, French artist Camille Henrot’s... [[Prehistoric Collections](#)] treats this ethnographic material as motifs of a contemporary grotesque,” states the Perimeter Books’s website.

Meanwhile, Mark Dion’s immersive, uncanny installation at La Brea Tar Pits and Museum in September 2024, [Excavations](#), displayed new work alongside “early museum murals, dioramas, and maquettes of Ice Age mammals in a playful... presentation,” the museum website states.

Labrusse recalls feeling “powerless” when he started applying his scientific skills and methods to prehistoric art (he is a professor of art history at *École des Hautes Études en Sciences Sociales*). “History requires context, facts, and elements to narrate it. These things are almost nonexistent when one looks back so far behind in time,” he explains. Many social scientists who study prehistoric history testify to a similar challenge. There is little evidence from prehistoric times and huge gaps of time for which the evidence is completely missing. “Prehistorians have the scientific honesty to recognize an irreducible ignorance, an impossibility of bringing out meaning,” notes Labrusse. “It is impossible to give a social, political, or aesthetic meaning to these societies.” During a [podcast interview](#) in 2019, he explained feeling first “like falling into a hole, caught up in an abyss of darkness. Then, as in *Alice in Wonderland*, you start to see through the looking glass.”

For him, the turning point came while exploring a prehistoric cave, a “very intimate, life-changing experience,” he says during the interview with me.

Discovering parietal scenes in the cave of Roucadour, Labrusse felt “as if they were contemporary. There is no context there, and things seem to float outside of any attributable meaning, so their appropriation is immediate, easy.” I learned this way to “let go of the burden of history,” which “dissolved like a soap bubble.” He recalls being tempted to touch these walls, reproducing these same gestures that the first men did back then. “Science now tells us that *Homo sapiens* has been the same for 100,000 years, even 300,000 years. Individuals have the same capacities, even possibly the same feelings as us today.”

The limits of science, when confronted with prehistory, are also an opportunity that artists have often seized to contribute to the field in their own way. It gives them a chance to tell this story differently. Aware of this, contemporary prehistorians sometimes invite painters or sculptors to work with them to create interdisciplinary meaning, an epistemology articulating a subjective point of view (art) with an objective approach (science).

The French government invited artists Ernest Pignon-Ernest, Giuseppe Penone, and Miquel Barceló, among others, to bring “[Other Perspectives](#)” to the [Chauvet-Pont d’Arc cave](#). To understand how a howl decorating the cave had been originally drawn, Barceló recreated first the same wet surface that was used by his predecessor as a canvas 35,500 years ago. He then drew a few lines like a graffiti artist in less than 10 seconds. His audacious and instinctive gesture was brilliant: the resulting drawing looked remarkably similar to the original one. “Only an artist can do this with his subjective impulsivity,” comments Labrusse. “A historian would not have dared to do it, keeping a rigorous mindset in his attempt to reproduce the drawing and, ultimately, failing to do so.”

In another style, the notorious [Adrie and Alfons Kennis](#), twin brothers who are “paleo artists,” are creating lifelike figures of early man that are touring museums and galleries around the world. Their hominids are fascinating and are another example of what art and science can do when working hand in hand.

By Yann Perreau

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