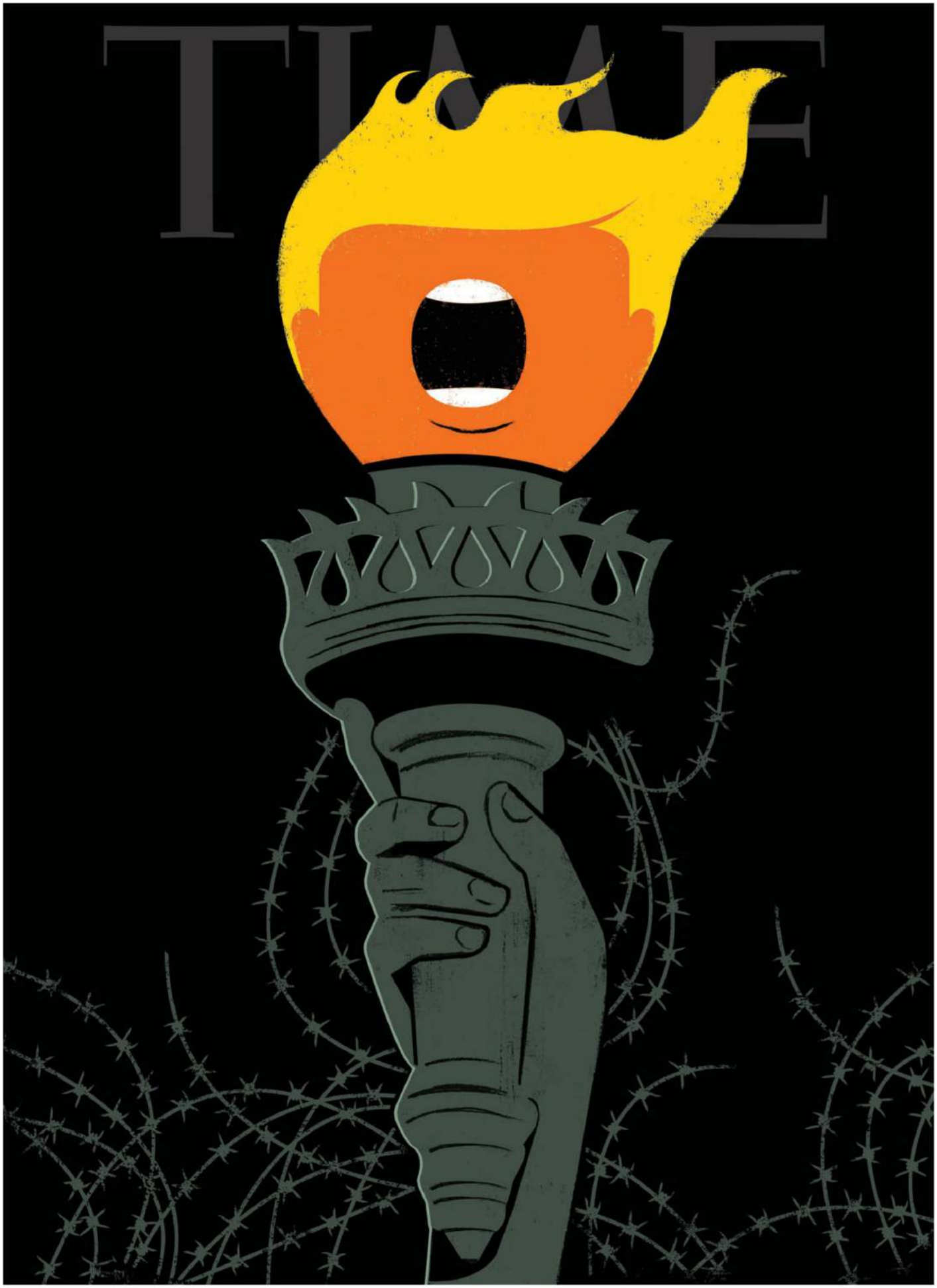
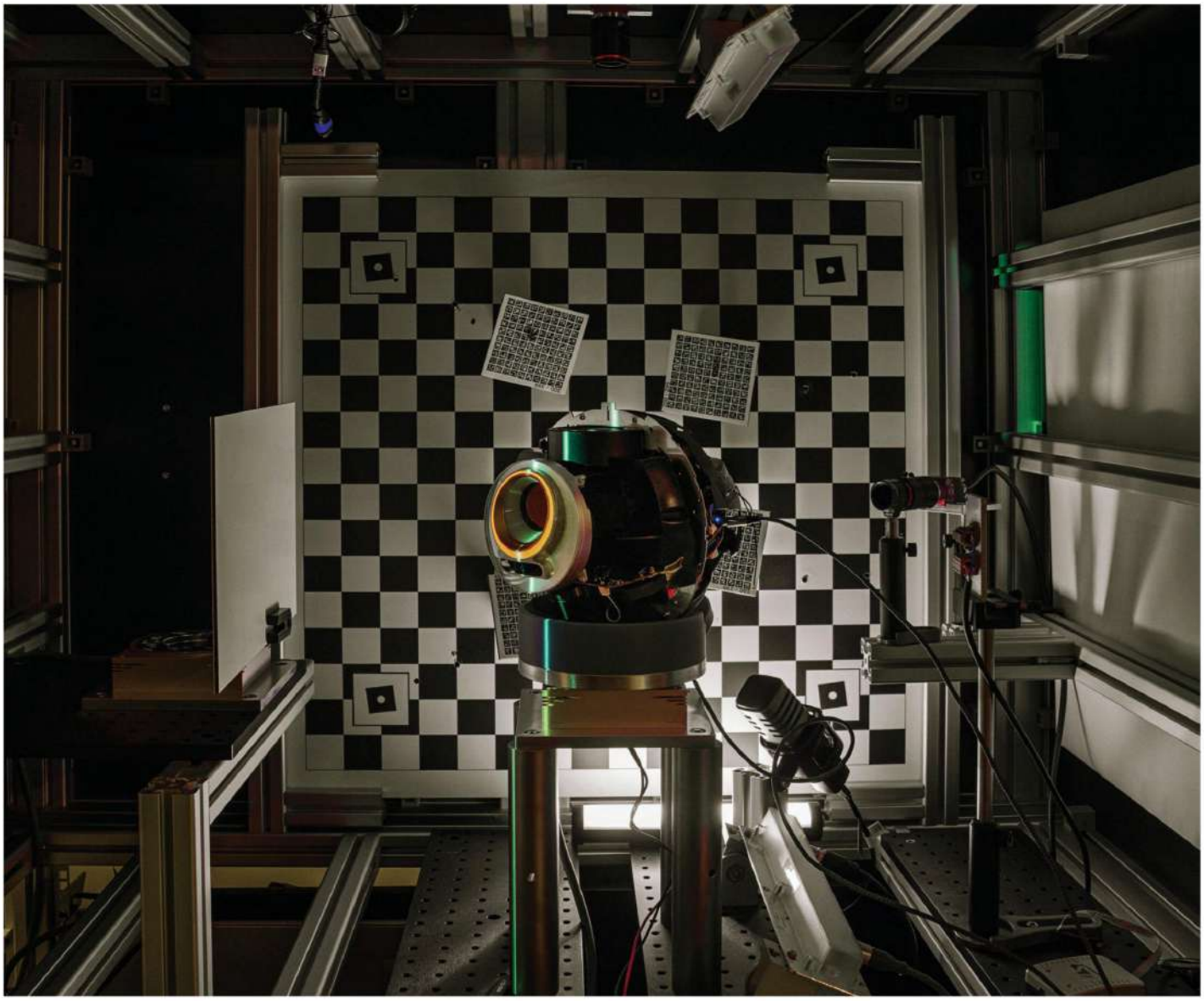

TIME

TIME
VOL. 205, NOS. 21–22 | 2025



CONTENTS

The Orb with calibration targets to ensure precision in iris detection
Photograph by Davide Monteleone for TIME

For customer service and our general terms and conditions, visit ***account.timeeurope.co.uk***, or call +44 1858 438 830 or write to TIME, Tower House, Lathkill Street, Market Harborough, LE16 9EF, United Kingdom. **PRINT SUBSCRIPTIONS:** Visit ***time.com/joinus38***. **REPRINTS AND PERMISSIONS:** Visit ***time.com/reprints***. For custom reprints, visit ***timereprints.com***. **ADVERTISING** For advertising rates and our editorial calendar, visit ***timemediakit.com***. TIME is published twice a month (except monthly in January and August) by Time Magazine UK Ltd., Suite 1, 7th Floor, 50 Broadway, London, SW1H 0BL. TIME is printed in the Netherlands and the U.K. Le Directeur de la Publication: Mike Taylor. C.P.P.A.P No. 0127 N 84715. Editeur responsable pour la Belgique: Marco Provasi, Rue de Grand Bigard 14 - 1082 Bruxelles - (Berchem Sainte Agathe). EMD Aps, Gydebang 39-41, DK-3450 Allerod. Rapp. Italia: I.M.D.s.r.l., via Guido da Velate, 11 - 20162 Milano; aut. Trib. MI N. 491 del 17/9/86, poste Italiane SpA - Sped. in Abb. Post. DL. 353/2003 (conv. L. 27/02/2004 -n. 46) art. 1 comma 1, DCB Milano, Dir. Resp.: Tassinari Domenico. Periodicals postage paid at New York, N.Y., and at additional mailing houses. Additional pages of regional editions numbered or allowed for as follows: National S1-S2. Vol. 205, Nos. 21-22 ISSN 0928-8430.

SAN MIGUEL – The Zest for Success

The global lemon processing industry is booming. Valued at $1.3 billion today, it is projected to reach $5 billion by 2031. This growth is fuelled by the rising demand for citric-based ingredients across a wide array of sectors – including cosmetic, personal care, pharmaceutical, cleaning and household products -- as well as being a key ingredient in many foods and beverages. The lemon industry is big business and growing exponentially.

With a 60% share of the global market, Argentina is the world's largest producer of processed lemon products. A key contributor to the country's dominance of the sector is the San Miguel company, the largest lemon processor in the world. Founded 70 years ago as a family business, San Miguel has become the main player in the industrial and fresh fruit lemon world. In 1996, the company consolidated its leadership position in the sector, becoming the largest producer and exporter of fresh lemons and lemon industrial products, including concentrated juices, essential oils, dry peel, and pulps. By 2020, fresh fruit accounted for 70% of the company's total revenue.

Along the way, however, a global oversupply led to a sharp drop in the price of fresh lemon prices -- from $1,200 to $600 per ton – prompting San Miguel's vice president Gonzalo Tanoira to take action. "We made the strategic decision to leverage our competitive advantage as the leading global lemon producers in order to carve out a niche for ourselves in the processed lemon sector," says Tanoira.

Since then, the company has invested $18 million in its Tucumán operations, with an additional $24 million in investments planned over the next five years. The funds are allocated for technology, R&D, infrastructure, the environment, and improved agricultural practices. San Miguel has also invested $32 million in Uruguay and $24 million in South Africa to develop new plants – all with the goal of securing San Miguel a 20% share of the global lemon processing market within the next three years.

Gonzalo Tanoira
Vice President of San Miguel

Today, San Miguel is the only company in the world with supply operations in three regions, which provides strategic protection against climatic, phytosanitary and regulatory risks. It has also repositioned itself as a knowledge-driven enterprise, investing heavily in research and development. The company now specializes in processing lemons to produce high-value derivatives like lemon oil and essences for use in thousands of cosmetic, pharmaceutical, and fragrance products.

This strategic shift has had a dramatic impact on the company's performance. The EBITDA loss of $37 million in 2022 was turned into a $1 million profit just 12 months later. By the end of last year, the company had achieved an EBITDA of $9 million, with annual gross profits reaching $18.4 million. Additionally, many other key performance indicators demonstrate that the company is moving in the right direction.

San Miguel exports its products worldwide and counts North America, Europe, the Middle East, the Far East, and Latin America as major markets where its long-term client relationships have helped ensure stable production planning and consistently growing sales.

With roots deeply embedded in its native Argentina, San Miguel has for years been a leader in environmental sustainability, with a long-standing commitment to responsible agricultural and industrial practices. It is another source of pride for Tanoira that the company has been instrumental in preserving twice as many acres of native forests as it uses for lemon production.

Over the years, the company has actively collaborated with many NGOs to support their reforestation and biodiversity conservation efforts. The company also invests in the development of advanced water conservation and treatment technologies to minimize the environmental impact of its production and processing activities. "We have a vision of a Latin America that works together to harness its natural and human resources, while simultaneously fostering economic integration and global competitiveness," says Tanoira.

As the demand for natural and healthy products continues to rise worldwide, San Miguel's expertise in lemon processing positions it at the forefront of a thriving industry. With a long-term focus on research, sustainability, and global expansion, the company is well positioned to remain a dominant force in the lemon market for years to come. And as Argentina undergoes significant economic changes, the company stands out as a shining light and national icon for the power and potential of sustainable growth.

San Miguel
The world leader in industrial lemon processing

TIME100 Philanthropy

TIME hosted a dinner May 22 to celebrate its inaugural list of 100 leaders in philanthropy, including *(clockwise from top)* Ayesha Curry, Stephen Curry, and David Beckham (pictured with Victoria Beckham); *Hamilton* creator Lin-Manuel Miranda; and Elizabeth Alexander of the Mellon Foundation. **time.com/time100-philanthropy**

Reel Talk

Grab the popcorn! TIME rounded up the 37 most anticipated summer movies. It's a summer of sequels, from *Freakier Friday* to *M3GAN 2.0* and *28 Years Later,* plus another Jurassic Park movie, *Jurassic World Rebirth,* will roar into theaters. A Brad Pitt *F1* movie (see the Time Off section) will likely drive ticket sales. And Wes Anderson's *The Phoenician Scheme* includes stars like Tom Hanks and Scarlett Johansson. Find all the features at **time.com/summer-2025**

On the covers

Photograph by Davide Monteleone for TIME

Illustration by Edel Rodriguez for TIME

Photograph by Joshua Irwandi for TIME

TALK TO US

SEND AN EMAIL:
letters@time.com
Please do not send attachments

FOLLOW US:
facebook.com/time
@time (X and Instagram)

Letters should include the writer's full name, address, and home telephone, and may be edited for purposes of clarity and space

Back Issues
Contact us at customerservice@time.com, or call 800-843-8463.
Reprints and Permissions
Information is available at time.com/reprints. To request custom reprints, visit timereprints.com.
Advertising
For advertising rates and our editorial calendar, visit timemediakit.com.
Syndication
For international licensing and syndication requests, contact syndication@time.com

Please recycle this magazine, and remove inserts or samples beforehand

THE GRIMALDI GROUP – Green Ambassador

The Naples-based Grimaldi Group signed a $1.3 billion agreement with China Merchants Jinling Shipyard (Weihai) this April for the construction of nine new Ropax vessels. Capable of carrying both passengers and rolling freight, the ships are destined for use on the company's Mediterranean and Baltic Sea routes. Their commissioning signalled another major step in Grimaldi's expansion plans, which in the past decade alone have seen it add several ground-breaking vessels to its fleet.

The Italian multinational shipping and logistics group has also been busy expanding its sphere of operations. Earlier this year, it launched a pioneering direct shipping service connecting Shanghai to Lagos -- eliminating the need for transhipments and cutting transport times between China and Nigeria, a rising regional power, to just 27 days. In February, it added India to its maritime network with a new route that includes calls at key ports in Europe and the Far East, further strengthening its presence in the Asian market.

Founded in 1947, the Grimaldi Group has evolved into an integrated logistics operator that today runs a network of over 20 fully owned and managed ports and port terminals situated across the Mediterranean, Northern Europe, and West Africa.

The China Merchants Jinling Shipyard deal has significant environmental implications. Equipped with engines capable of also running on methanol, all nine new vessels will comply with Grimaldi's dual-fuel strategy. All in all, the purchase amounts to one more strong statement of the group's commitment to the industry's goal of reaching zero emissions by 2050.

"We shipowners are both ambitious and responsible, and we made 2050 our goal before the regulators did," says Dr. Emanuele Grimaldi, managing director. As chairman of the International Chamber of Shipping (ICS) for the past three years, he has been instrumental in helping the shipping industry as a whole steer a course through some very choppy waters, as well as in urging it forward to ever-greater levels of sustainability. "We are already ready for 2050."

Dr Emanuele Grimaldi
Managing Director of Grimaldi Group

The Grimaldi Group has also been a trailblazer in the shipping industry's adoption of digital technology to improve the overall sustainability of its operations. This effort includes, among other things, the design and order of state-of-the-art vessels, the implementation of shore power systems, and the development of digital twins for ship design and optimization.

Meanwhile, the Grimaldi Group has been spearheading the maritime use of satellite technology. As part of this effort, it has for the past three years been working with the European Space Agency (ESA) and several other Italian and Norwegian partners to develop an assisted guidance system that will eventually allow for the autonomous docking of large vehicle carrier vessels. Such a system will significantly improve the efficiency, safety, and eco-sustainability of manoeuvres in port, and represents a substantive step in the quest for the holy grail of autonomous navigation.

The maritime industry is rapidly embracing AI's potential with gusto – and once again, Grimaldi is leading the way. The company has implemented AI-driven pricing algorithms that dynamically set ticket prices based on occupancy, time, and competition. Its optimization software is also using AI, in this case to analyze ocean currents to reduce fuel use. "AI will soon eliminate human error," Emanuele Grimaldi predicts.

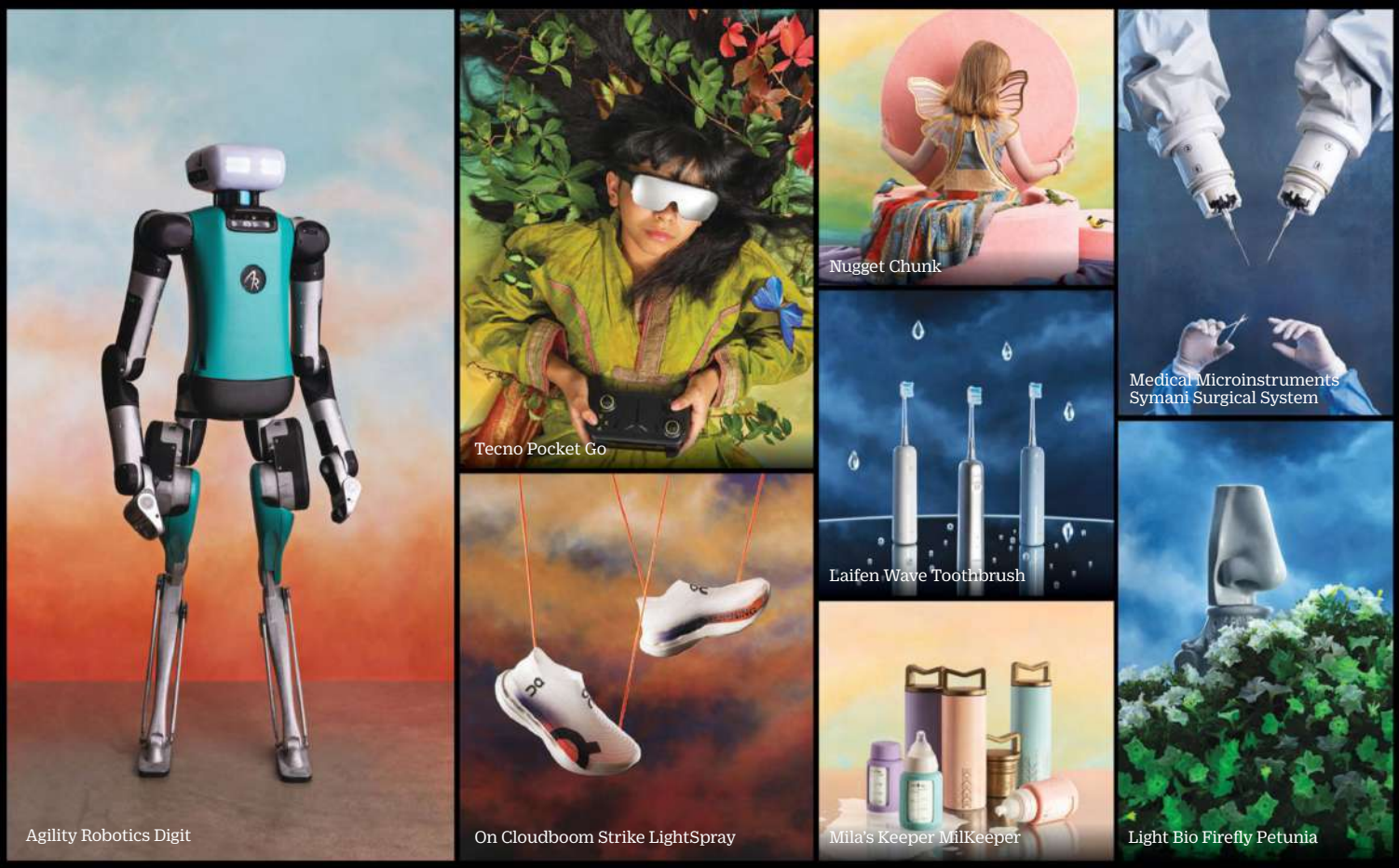
But that doesn't mean the human element is any less important. Grimaldi insists the need for a talented and motivated workforce remains essential, even as the required skill set is bound to be more technical and knowledge-based than those of previous generations. A fervent advocate for gender equality and value redistribution, the group shares a substantial share of its revenues with its employees and offers its managers highly attractive bonus incentives. Most of the direct and indirect staff, including those employed at its terminals and ports, have access to a generous range of welfare packages.

In a wider context, the Grimaldi Foundation has been investing in projects related to education, seafarers' welfare, and local communities since 2007. The non-profit organization, founded and chaired by Emanuele Grimaldi, is the leading privately run foundation in Central and Southern Italy in terms of sums disbursed. It is mainly financed by Grimaldi family assets and contributions from the Grimaldi Group, as well as from its Italian subsidiaries Grimaldi Euromed and Grimaldi Deep Sea.

Dr. Grimaldi has been a driving force behind the Grimaldi Group's spectacularly successful growth for decades, and he has brought that same broad experience to bear at the ICS. One of his major achievements as chairman has been bringing China into the association. When he steps down from its chairmanship next year, history will surely judge him as a leader who combined global diplomacy with hard-headed innovation, and who steered the ICS – just as he has done with the Grimaldi Group – towards a sustainable and resilient future.

GRIMALDI GROUP

TIME
BEST INVENTIONS



IS YOUR INNOVATION CHANGING HOW WE LIVE?

ENTER NOW

bestinventions.time.com

The Brief

SNEAK ATTACK

BY SIMON SHUSTER

Ukraine's audacious drone strikes deep inside Russia may announce a new era in warfare

INSIDE

PHOTOGRAPH BY OLEG PETRASIUK

THE DRONE FACTORY IN KYIV HAD AN ENVIABLE problem. It could make more combat drones than the Ukrainian military needs. The heavy ones, known as Vampires, can be assembled at a rate of 4,000 per month, the factory's founder told me on a tour of the facility in March. The smaller ones, similar to the drones Ukraine used on June 1 to attack several Russian air bases, could be made many times as fast, he said: roughly 4,000 per day.

All around us, the noise of the production line made it difficult to hear, as did the speaker system playing '80s music. ("I just died in your arms tonight …") So I asked the founder to repeat himself: 4,000 drones … per day? "Yeah, that's at full capacity," he said. "Right now we're only making around half that."

The surprise attack on June 1 targeting Russian military aircraft parked as far away as Irkutsk, more than 3,000 miles from Ukraine, employed a total of 117 kamikaze drones, according to President Volodymyr Zelensky. Each of them costs around $400 to produce, and they destroyed Russian bombers worth billions, by Ukraine's count. That would make this operation, dubbed Spider's Web by Kyiv, one of the most efficient, dollar for dollar, in the history of warfare. Some Kremlin propagandists even called it Russia's Pearl Harbor.

That's a stretch. Thousands of Americans were killed in the Japanese surprise attack on Dec. 7, 1941, while the June drone strikes against Russia did not cause any reported deaths. Ukraine's main spy agency, the SBU, claimed more than 40 Russian aircraft were damaged, about a third of the nation's strategic-bomber fleet; Western estimates suggested roughly a dozen Russian planes.

In any case, the SBU operatives behind the strike deserve to take a bow. They managed to sneak the drones into Russia inside shipping containers, which were driven close to the air bases on commercial trucks. Once in position, the tops of the trucks popped open, allowing the drones to launch and fly toward their targets, feeding live footage of the strikes to their pilots back in Ukraine. Zelensky called it a "brilliant operation" that had taken some 18 months to prepare. "Planning, organization, every detail was perfectly executed," he said.

But as the Russian targets still smolder at their bases, military strategists around the world are already wrestling with what this strike means for the future of warfare. How will such weapons be used in other conflicts? How can any nation protect its most senior officials, even its heads of state, when a fleet of drones could be hiding in a truck next to their public events? For the moment, the drones Ukraine produces remain inside the country, because the government has banned their export during the war. Once the war ends, those restrictions are likely to be lifted, and Ukrainian drones could appear on the global market in abundant supply. Last year, Ukraine produced more than 2 million combat drones of various types. This year, it's on the way to making twice that many.

For Kyiv, the foreign market for these weapons is central to rebuilding and rearming after the war. One lawmaker estimated last year that drone sales could earn Ukrainian manufacturers some $20 billion, which could be reinvested into the domestic arms industry. The founder of the factory that TIME visited in March told me he has already received purchase requests from European countries, as well as Egypt, India, and Pakistan. "They all know our drones work, because they've been tested in actual combat," he says, asking not to be named for security reasons.

'Protecting military objects is going to get a lot harder. The usual strategies won't work.'

—UKRAINIAN MILITARY INTELLIGENCE OFFICER

ONCE THESE DRONES become widely available, governments around the world may need to rethink their military doctrines, as well as their protocols for guarding state officials. Nonstate actors have already shown their skills in drone warfare. With backing from Iran, the Houthi rebel group used drones to attack commercial ships last year in the Red Sea, disrupting global trade routes. The U.S. responded with a largely ineffective bombing campaign against Houthi positions.

"Our adversaries use $10,000 one-way drones that we shoot down with $2 million missiles," the commander of U.S. Special Operations Command, Army General Bryan Fenton, told a congressional hearing in April. "That cost-benefit curve is upside down."

Ukraine has used this asymmetric advantage to great effect against Russia. But many in Kyiv see the long-term risks of the weapons they have unleashed. Last fall, an officer for Ukraine's military intelligence agency showed me a prototype for a new type of drone that had been used in numerous strikes inside Russia. It looked like a model airplane with an explosive shell attached to its belly, and the officer said it had a range of at least a thousand miles.

He was clearly proud of the ingenuity that went into the drone's development. But as an expert in security, he also wondered what would happen if these weapons end up in the wrong hands. "Protecting military objects is going to get a lot harder," he told me. "The usual strategies won't work." □

The Brief includes reporting by Chantelle Lee and Olivia B. Waxman

Smoke show

A cloud of ash and smoke billows from Mount Etna in Sicily, Italy, on June 2. Authorities said nearby residents weren't at risk, but tourists were evacuated from the summit of the 11,000-ft. volcano, known as one of the most active in Europe. Italian volcanologists said the plume rose from lava flows after a partial crater collapse.

OPENING PAGE: UKRAINE'S 24TH MECHANIZED BRIGADE/AP; MOUNT ETNA: GIUSEPPE DISTEFANO—AP

THE BULLETIN

Boulder, Colo., attack highlights rising antisemitism

THE FIREBOMBING OF A RALLY IN Boulder, Colo., supporting the release of Israeli hostages held in Gaza continued a surge in antisemitic incidents and hate crimes toward Jewish Americans. A dozen people were injured in the June 1 incident involving an improvised flamethrower. It came less than two weeks after two Israeli embassy employees were fatally shot outside the Capital Jewish Museum in Washington, D.C. Suspects in both attacks shouted "Free Palestine!"

RISING FEARS Antisemitic incidents in the U.S. skyrocketed 361% in the three months after the October 2023 start of the Israel-Hamas war, according to the Anti-Defamation League (ADL). In February, the American Jewish Committee reported that 33% of American Jews said they had been the target of antisemitism, in person or virtually, at least once over the past year. In the same report, 56% of American Jews said they had altered their behavior out of fear of antisemitism in 2024, up from 46% in 2023.

SOCIAL MEDIA A 2024 ADL survey found that younger Americans were more likely to endorse anti-Jewish tropes. The highest rate was among millennials, and the lowest among baby boomers. The rise of antisemitism coincides with both opposition to Israel's actions in Gaza, and an increase in antisemitic hate speech being shared on social media platforms such as TikTok and Instagram, which tend to be more popular among young people. "Some students turn to TikTok or Instagram influencers for their understanding of a really complex geopolitical situation," says Mark Oppenheimer, a professor of practice at Washington University. "It's increasingly acceptable to talk about Jews in broadly stereotypical terms, as Joe Rogan does, as Kanye West does, as Trump has."

COMPLEX POLITICS At the same time, President Trump is accused of exploiting antisemitism by citing campus Gaza protests to justify massive funding cuts to specific universities. Senate minority leader Chuck Schumer and four other Jewish Senators said Trump is using "a real crisis as a pretext to attack people and institutions who do not agree with you."

—CALLUM SUTHERLAND

GOOD QUESTION

Why are '100-year storms' happening so often?

BY JEFFREY KLUGER

CLIMATE CHANGE IS LEADING NOT ONLY TO DROUGHTS, wildfires, and extreme weather. It's also leading to oxymorons—at least when it comes to what are known as 100-year storms, floods, and other events.

Long-term weather forecasting is all about probabilities, factoring together not only current conditions and trends, but also the historical record. Environmental scientists have gotten so good at reading weather history that they can characterize some severe storms or floods as likely to occur in a given area only once in 100 years—or even 500 years or 1,000 years.

That's where the oxymoron comes in. As climate change leads to greater meteorological volatility, the events forecast to happen once in 100—or 500 or 1,000—years are occurring twice or three times or more in those windows. Since 1999, there have been nine storms along the North Carolina coast that qualify as 100- or 1,000-year events. One study by the Montreal-based carbon-removal project Deep Sky calculates that the frequency of deadly hurricanes has jumped 300%, with "100-year storms" now forecast to occur once every 25 years.

Climate change is heating up the atmosphere, leading to extreme weather

Climate change is also redefining what qualifies as one of these rare and intense events. "In April, an extreme rainfall event hit the Mississippi Valley," says climate scientist Andrew Pershing, chief program officer at Climate Central, an advocacy and communications group. "The World Weather Attribution group did a study and calculated that it was a 100-year event based on today's climate, but without climate change it would have been more like a 500-year event."

MAKING THOSE KINDS of calculations can take some doing—and a fair bit of data modeling—because climate unfolds over the course of millennia and modern weather and climate records barely go back a century. "Scientists first look at 30 years of data, 50 years of data and figure out how frequently these events occur," says Pershing. "The challenge is that when you do that you're using data from the past when it was around 2° cooler than it is now. When you start to do the calculations for today's climate, you find that events you expect to happen once every 100 years may happen once every 20 years."

Driving the more frequent events is what Pershing describes as a "thirstier" atmosphere, one that is hotter and capable of holding more moisture. "We have a supercharged water cycle, and that means that when you get a rain event it has a better chance of being a bigger event," says Pershing.

Some of those bigger events could be coming soon—in the form of hurricanes. On May 22, the National Oceanic and Atmospheric Administration (NOAA) released its projections for storm severity in the 2025 Atlantic hurricane season, which runs from June 1 to Nov. 30. NOAA did not attempt to predict 100- or 500- or 1,000-year events, but it does see trouble looming. The agency projects a 60% chance of an above-average hurricane season, a 30% chance of an average season, and just a 10% chance of below average. Across the six hurricane months, NOAA predicts 13 to 19 named storms—with winds of 39 m.p.h. or higher. Up to five of those could be major hurricanes—Category 3, 4, or 5. And the impact could extend far beyond the coastal regions that are usually hardest hit.

In addition to hurricanes, floods, and storms, heat waves, droughts, and wildfires also can be projected over centuries. "A hotter atmosphere can hold more water, but if you squeeze that moisture out over a mountain range like what happens in the West, then you end up with a much drier air mass," says Pershing. "The atmosphere then wants to suck the moisture out of the ground."

There's no easy fix for a feverish atmosphere. In the short run, adaptation—dikes and levees to protect flood-prone cities, relocating residences away from eroding coasts—can help. In the longer run, shutting off the greenhouse emissions that created the problem in the first place is the best bet for limiting 100-year storms to their 100-year timelines. "We have to quit the use of fossil fuels as fast as we can," says Pershing. "This will give the climate a chance to stabilize and us a chance to adjust." □

'We have to quit the use of fossil fuels as fast as we can.'

—ANDREW PERSHING, CLIMATE SCIENTIST

STORM: MARIO TAMA—GETTY IMAGES; SWIFT: MICHAEL BUCKNER—VARIETY/GETTY IMAGES; SALGADO: AMIN AKHTAR—LAIF/REDUX; ROBERTSON: PICTURELUX—THE HOLLYWOOD ARCHIVE/ALAMY

DEPARTED

Elon Musk, abruptly, on May 30, from his role leading the Department of Government Efficiency, which made controversial federal spending cuts. He later blasted the President Trump–backed domestic-policy bill.

PARDONED

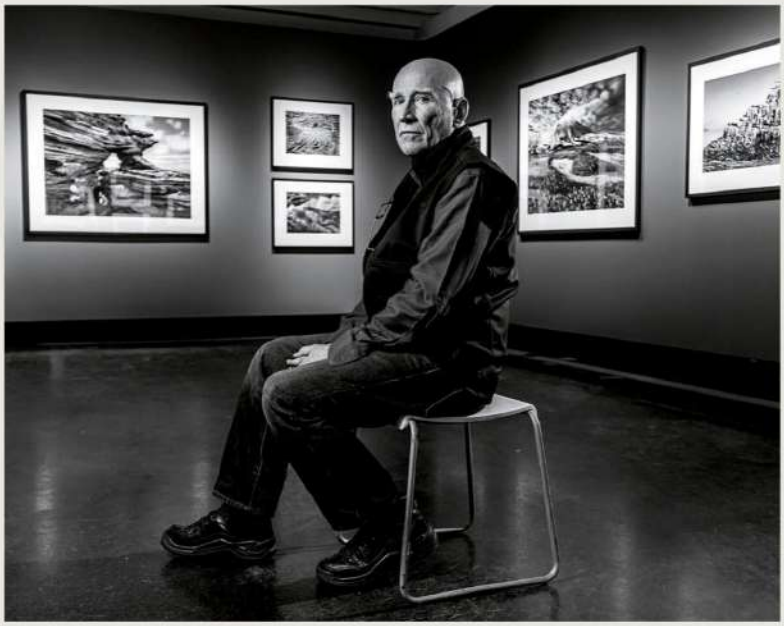
Convicted tax cheat **Paul Walczak,** by President Trump, on April 23, less than three weeks after his mother attended a $1 million-a-plate Trump fundraiser, it was reported in May.

DIED

- **Loretta Swit,** the actor best known for her role as U.S. Army nurse Major Margaret "Hot Lips" Houlihan on the sitcom *M*A*S*H,* on May 30. She was 87.
- **Jonathan Joss,** the *Parks and Recreation* actor, who was shot and killed at 59, on June 1. Despite his husband's claim that it was a hate crime, police said there was no evidence indicating the murder was related to Joss's sexual orientation.

PURCHASED

The rights to **Taylor Swift's first six albums,** by the singer after a yearslong dispute over the ownership of her music. Swift announced the news on May 30.



DIED

Sebastião Salgado

Photographer and humanitarian

SEBASTIÃO SALGADO, 81, WHO DIED IN PARIS ON MAY 23, TOOK photographs that were too beautiful to look away from. This was key since his subjects were often those which people didn't want to see: humans laboring in brutal conditions, families trying to find safe haven through hostile terrain, the decline of the environment.

Born in Brazil in 1944, but exiled in 1969, Salgado was college-trained in economics and self-trained in photography. He shot photos in more than 120 countries, capturing events as varied as the 1980s Ethiopian famine, the attempted assassination of President Ronald Reagan, and firefighters in Kuwait battling burning oil wells. He endured land mines, malaria, freezing temperatures, and thousands of miles of barely walkable roads to get the images he wanted.

His photos lured attention rather than begging it, mesmerizing while they messaged. The most famous, like those of Brazilian gold miners swarming up and down perilously rickety ladders, are equal parts astonishing and horrifying, a concerto of scale, light, and movement. His blacks are sooty and his whites luminous. Skies are marbled, landscapes vast.

In the aftermath of documenting the Rwandan genocide in 1994, Salgado put down his camera for a season and founded the Instituto Terra with his wife Lélia Wanick Salgado, helping to reforest Brazil's Rio Doce valley. This environment led him back to photography, as he captured the traditions of Indigenous people.

He lamented that critics said his work "aestheticized tragedy" and that the injustices and the vanishing natural wonders he documented so painstakingly led to very few changes. "I am pessimistic about humankind, but optimistic about the planet," he told the *Guardian* in 2024. "The planet will recover. It is becoming increasingly easier for the planet to eliminate us." —BELINDA LUSCOMBE

DIED

Phil Robertson

Duck Dynasty patriarch

Duck Dynasty star Phil Robertson died at age 79, his family announced on May 25, a few months after revealing he had been diagnosed with Alzheimer's disease.

The Louisiana-based college football player turned professional hunting entrepreneur in 1972 invented the Duck Commander duck call, the namesake product of what became a multimillion-dollar hunting-gear company.

The family expanded its business into media with a number of reality TV shows, most notably A&E's *Duck Dynasty,* which aired from 2012 to 2017 and is set for a "revival" focused on Robertson's son and his family, premiering this summer.

Robertson was outspoken about his sometimes controversial Christian and conservative views—particularly on homosexuality and abortion. Fans, however, praised his dedication to his faith and how he lived unapologetically.

—Chad de Guzman

CURCIO CAPITAL – A Model for Conscious Capitalism

Uruguay, though relatively small compared with most of its Latin American neighbors, has nevertheless emerged in recent years as a driver of technological innovation and a magnet for inward investment. In a region frequently plagued by sky-high inflation, political instability, and sudden changes in economic policy, Uruguay -- with a population of just under 3.5 million -- stands out as a haven for investors. This is in part thanks to a combination of the nation's democratic tradition, renewable energy infrastructure, and enduring social and political stability. According to the UN Conference on Trade and Development's World Investment Report 2023, Uruguay's total stock of foreign direct investment (FDI) stood at just over $36 billion, more than 50% of the country's entire GDP.

Foreign investors have also been attracted by the favorable regulatory environment -- consistently upheld by successive governments, regardless of political inclinations. These investors enjoy the same rights and fiscal incentives as local entrepreneurs, and they operate in a business climate where there is no limit on the transfer of profits or the repatriation of capital. Another reason Uruguay is now punching far above its weight as an inward investment destination is its fast emergence as a launchpad for ground-breaking 21st-century business models.

One of the companies at the heart of this revolution is Curcio Capital, a privately owned holding company that blends ambition with conscience, profitability with purpose, and regional roots with a global vision. The company

Alejandro Curcio
President of AYAX and Curcio Capital

prides itself on efficiency, sophistication, commitment to innovation, and determination to adapt to changing market conditions. Its subsidiaries operate across diverse sectors but are bound together by their pursuit of purpose, meaning, and a common objective of making a long-term contribution to society.

Curcio Capital traces its roots back to AYAX, the automotive company that Emilio J. Curcio founded in 1945 to capitalize on the surge of prosperity and consumer confidence that followed the end of World War 2. AYAX started out marketing Bedford and Vauxhall vehicles and then progressed to becoming a dealership for General Motors. In the early 1960s, Curcio established Uruguay's first automotive plant dedicated to the assembly of the FIAT 600 and secured a 38% market share before selling to FIAT Italia. That same year, it became the representative of Toyota and is now also Suzuki's official Uruguayan distributor.

But Curcio and his family's ambitions extended far beyond the combustion engine.

In 2017 Alejandro created Curcio Capital, and the company he founded has reinvented itself as a diversified holding company operating in mobility, real estate, digital advertising, emerging tech, and wellness ecosystems, driven by a mission to develop and nurture companies that have a soul as well as satisfied shareholders. "Each of our ventures is designed around a core philosophy," says Alejandro Curcio. "They need to create value economically, socially, and emotionally. And that's not just some slick marketing tagline; it's our northern star, our guiding light."

It is a star that has taken the company in some interesting and sometimes unexpected directions. An early champion of Uruguay's shift toward electric and hybrid vehicles, AYAX is energetically promoting the sale of electric vehicles, while also actively developing the country's charging infrastructure and participating in the formulation of its EV regulatory framework. And though yet to achieve universal adoption, its ambitious HY Project seeks to equip Toyota EVs and hybrid vehicles with an acoustic warning system that emits a sound that both warns pedestrians and stimulates plant growth. The concept won a World Changing Ideas Awards at Cannes in 2021.

The idea clearly resonates with Curcio in more ways than one. "I lead like a gardener," he says. "My job is to create fertile ground, then I step back and let others do the growing. Ego is the enemy of innovation. I learn from every failure, and I firmly believe that in life there are no

failures, only results." He is currently "deeply invested" in a project that merges AI, sound frequencies, and neuroscience to enhance well-being, productivity, and creativity.

Curcio Capital has also been quick to integrate wellness into the real estate market. The company is the driving force behind the development of El Nido Beach & Surf Homes, with its blend of natural beauty, promotion of a healthy lifestyle, family-friendly amenities, and strong community spirit. The project offers a welcome addition and alternative to the holiday center of Punta del Este, whose beautiful beaches, upscale resorts, and glamorous nightclubs have prompted frequent and favorable comparisons to St. Tropez.

The El Nido Beach development is surrounded by tall, ancient forests that slope down to the sea, with views of both the South Atlantic and the distant Cuchilla Grande mountain range. One of its main attractions and a source of great pride to Curcio is its Wavegarden, a cutting-edge space that includes an artificial wave pool capable of generating up to 1,000 perfect waves per hour, of all shapes and sizes,

"El Nido in an excellent real estate investment, but it is more than that," Curcio says. "It represents a new way of understanding well-being and our connection with nature -- and has been carefully designed to create an environment where families can enjoy themselves to the fullest. It's what we call lifestyle infrastructure."

Like much of the world, both Uruguay and Curcio Capital were profoundly affected by the COVID-19 pandemic. But the company has always embodied the maxim that necessity is the mother of invention, and it quickly fast-tracked the development of its digital platforms in response. "Crises act as magnifiers," Curcio notes. "They reveal who is just big and who is truly built to last." Meanwhile, during the recent currency fluctuations triggered by geopolitical tensions, it again reacted swiftly by diversifying into knowledge-based services to hedge its exposure.

Simultaneously, the company has continued to harness the recent rapid developments in technology and is now deploying AI-driven advertising platforms, exploring neurotechnology to enhance human performance, and building a series of e-commerce solutions tailored to the Latin American consumer. "We're entering an era of convergence between biology and technology, profit and sustainability, and the physical and the digital," says Curcio, who is himself a student of neurolinguistic programming. "That's where we want to play."

The company is, as a result, working on initiatives that foster mobility-as-a-service, green logistics, and even digital identity solutions for more inclusive access to transportation.

While its president's drive and vision are certainly two of the principal reasons for the company's success, Curcio is the first to admit that it is the company's ability to attract and retain some of the best talent that Uruguay has to offer that keeps it ahead of the pack. "Uruguay's home-grown talent is one of its most powerful assets, and we have a young, educated, globally connected population with strong values," he says.

"WE BELIEVE IN RETAINING THAT TALENT, AND WE OFFER OUR EMPLOYEES OPPORTUNITIES THAT ARE INTELLECTUALLY CHALLENGING, SOCIALLY IMPACTFUL, AND GLOBALLY SCALABLE. TALENT IS NOT A RESOURCE, IT'S A RELATIONSHIP, AND WE INVEST IN THAT RELATIONSHIP EVERY DAY."

He also believes in giving something back to Uruguayan society. In keeping with this, the company has for decades been contributing to causes related to education, children, mental health, inclusive mobility, digital access, and environmental conservation. "Social responsibility is not simply a box we tick, it's embedded in our strategy," he says. "We focus on creating real, measurable, and emotional impact."

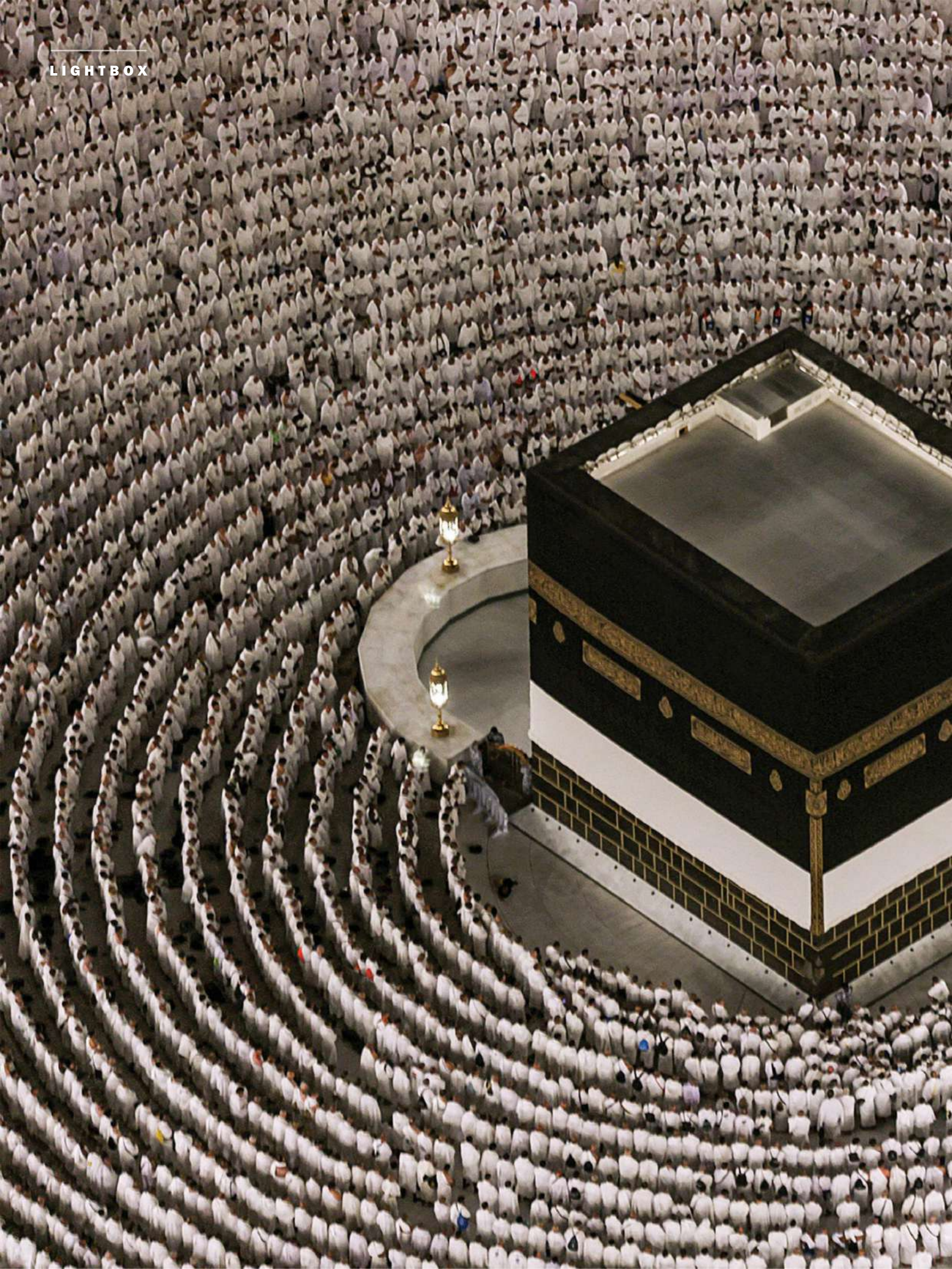
Given its size, Uruguay may to outsiders seem an unlikely hub for innovation, but not to Curcio. He believes that what the country lacks in terms of scale and capital muscle compared with its Latin American neighbors, it more than makes up for in the enduring stability of its institutions, the transparency of its governance, and now its near-total adoption of renewable energy. "Uruguay is not just where we operate, it's where we prototype the future," he says.

"THIS COUNTRY REWARDS THOSE WHO THINK LONG-TERM. IT'S NOT FOR THE IMPATIENT, BUT FOR THOSE WHO SEEK VALUE WITH VISION. WE SEE IT AS A HAVEN WHERE WE CAN INNOVATE AND TEST NEW IDEAS BEFORE EXPANDING INTO LARGER MARKETS."

Curcio is now on a mission to roll out his business model across the rest of Latin -- and even into North America -- looking to forge partnerships in Argentina, Brazil, Mexico, and the U.S. But only with collaborators who share his vision and values. "We want partners who understand that ROI also means Return on Impact -- people who see business not just as a means of extracting profit, but of contributing to society. We're not merely looking for capital, we're looking to make strategic alignments with partners who bring ideas, ethics, and boldness to the table, as well as resources."

He also views Curcio Capital as an ambassador for the broader Uruguayan business community and to that end is planning to attend a number of global forums to show off its potential to a wider audience. "I see Curcio Capital becoming a model of conscious capitalism," he says, "a Latin American enterprise that proves business can be global, profitable, and still deeply human."

CURCIOCAPITAL
SINCE 1945



A new hajj

Muslims gather at the Kaaba in Mecca on June 1, three days before the start of hajj. This year, under a new rule imposed as an effort to reduce overcrowding, the expected 2 million pilgrims are barred from bringing children. Saudi officials also have tightened visa enforcement, deployed AI surveillance drones, and installed the world's largest cooling system in the Grand Mosque complex. In 2024, more than 1,300 people died amid temperatures that reached 116 °F (47 °C).

Photograph by Hazem Bader—AFP/Getty Images

For more of our best photography, visit time.com/lightbox

5 ways to swim safely this summer

BY ANGELA HAUPT

THAT GLISTENING SWIMMING hole might look—and feel—refreshing on a sweltering day. But writhing in pain from stomach cramps, nausea, and vomiting? Staring at the bathroom ceiling instead of the blue, sunny sky? Not so much.

Jumping into even the prettiest and clearest rivers, lakes, creeks, and other natural bodies of water can expose you to a cesspool of unpleasant and invisible fellow swimmers—most commonly bacteria, viruses, and parasites. "These germs are microscopic, so you're not going to be able to tell they're there," says Bill Sullivan, a professor of microbiology and immunology at the Indiana University School of Medicine and author of *Pleased to Meet Me: Genes, Germs, and the Curious Forces That Make Us Who We Are*. "Swimming is a great, fun activity—don't get me wrong. But you do need to be mindful that there are dangers that lurk out there."

That's especially true for certain people. If you're mostly healthy, you'll fare better than some; if you're exposed to bacteria or other nefarious germs, your body should recover fairly successfully. The people most susceptible to severe illness are "the very young, the very old, and those with pre-existing conditions that weaken their immune system," Sullivan says. "If you're in one of those vulnerable populations, you should definitely reconsider swimming in questionable water."

We asked experts how to stay safe from the threats that might be hiding in your favorite swimming hole.

1. Heed posted warnings

Take signs about swimming risks and possible contamination seriously. "If somebody's taking the time to provide health guidance, it's worth listening to it," says Dr. Daniel D. Rhoads, section head of microbiology at the Cleveland Clinic. Check local water-quality reports and your destination's social media account. Some parks post warnings about the water, especially after severe storms or if there's been a sewage leak.

2. Use all of your senses

Most of the time, the water you're swimming in won't have any noticeable signs of what's lurking beneath. But if you detect a foul odor or notice a strange color, stay out. Discoloration could indicate "there's discharge from a pipe or a nearby golf course," says Rachel Noble, a professor in the Institute of Marine Science at the University of North Carolina. If you see a lot of cloudiness, or if a clear lake has spots covered with algae, "then the likelihood is that there's some sort of runoff that's getting to that location," she says. "The runoff can contain things that make you sick, so use your senses."

3. Pay attention to the weather

The risk of infection spikes in the aftermath of a storm. Heavy rain can wash all kinds of contaminants into the water: dog waste from nearby paths, debris, chemicals, human sewage, and more. It's impossible to say exactly how long the risk remains elevated, Noble says, because many factors influence it. But if you notice active runoff—or rainwater flowing across the land into the water—it's best to stay on dry land.

4. Use earplugs and nose plugs

Wearing earplugs when you swim can help protect you from the bacteria that cause swimmer's ear. And nose plugs (sometimes called clips) act like "a clamp for the outside of the nose," Sullivan says, which can block water from entering your nostrils. The U.S. Centers for Disease Control and Prevention recommends swimming with a nose clamp to help ward off serious infection.

5. Don't swim if you have open wounds

This can help protect you from necrotizing fasciitis, the flesh-eating bacteria sometimes lurking in salty or brackish water. You should also cover any cuts, scrapes, or fresh tattoos or piercings with a waterproof bandage, Sullivan advises. And watch where you're going. "If there's a lot of rocks or shells, and they cut you while you're swimming, the flesh-eating bacteria can get into your body that way."

PHOTO-ILLUSTRATION BY TIME; SOURCE IMAGES: AKARADECH PRAMOONSIN—GETTY IMAGES; GARY YEOWELL—GETTY IMAGES; MARIIA SIURTUKOVA—GETTY IMAGES; MARIAKRAY/GETTY IMAGES

The View

CULTURE

SO LONG, SONG OF THE SUMMER

BY TAYLOR CRUMPTON

The idea of a pop monoculture has not only ceased to exist but also resulted in the loss of shared cultural touchpoints that connect millions of Americans. A fragmented culture stands in its stead, thanks to the rise of the curated algorithm and social media feeds perfectly sculpted to fit our interests and experiences. Yes, this has made us more—or at least feel more—disconnected. But is that so bad?

INSIDE

Perhaps, in the absence of the so-called meritocracy that once dictated culture, this abundance of choice for people to connect with music and pop culture could be a good thing. Maybe that's why the Song of the Summer feels like such a dinosaur. We've simply grown out of it.

In 2010, when *Billboard* created the Songs of the Summer chart, it explained that a song's place was determined by its "cumulative performance on the weekly streaming, airplay, and sales-based Hot 100 chart from Memorial Day through Labor Day." This made sense, given the time. In 2010, Facebook was the most popular social media platform. The first-generation iPad had just been made available to the public. And "California Girls" by Katy Perry was the No. 1 song on the inaugural Song of the Summer chart. That song was everywhere—you couldn't escape it.

Fast-forward to 2024, and the *Billboard* Song of the Summer was "I Had Some Help" by Post Malone featuring Morgan Wallen. The top placement seems to be at odds with Brat summer, the meteoric rise of Chappell Roan, the bubblegum pop of Sabrina Carpenter, and the historic rap beef of Drake and Kendrick Lamar, all of which betrays the chart's inability to encapsulate the music that people are actually listening to.

This is partly because of TikTok, which has completely changed the way music streaming (and a song's popularity) operates. And their data tells a different story. On TikTok's U.S. summer charts, Tinashe, Blood Orange, ian, Lay Bankz, GloRilla featuring Megan Thee Stallion, and Jordan Adetunji held the coveted top spots, a list that reflects how vastly the concept of the Song of the Summer has changed. Americans, rather than being homogeneous music consumers, are shifting toward personalized music experiences and playlists.

For emergent artists, this is a double-edged sword. They are now utilizing data from social media platforms to shape and develop how they connect with their audiences. But the unintended consequences of personalization include fewer access points for artists to connect with new fans, unless they find their way onto a listener's algorithmic playlists. Consider that in the 1990s and 2000s, artists might be exposed to a larger audience via song placement on a prominent movie soundtrack or a guest appearance on a popular television show. The advent of streaming has narrowed that pipeline for musicians.

THE ONLY ARTISTS to claim the worldwide dominance and control over music and pop culture that symbolizes any semblance of a monoculture are Beyoncé and Taylor Swift. In 2023, the Renaissance World Tour and the Eras Tour generated billions of dollars. Throughout their respective decades-long careers, both women have appeared on film and TV, and music-video programs, performed at televised award shows, and released chart-topping songs that, yes, defined a summer. Yet in a multicultural world, where consumers and listeners are curating their own experiences, there is no longer a need for uniformity.

Back in 1999, music critic Ann Powers described songs of the summer in the New York *Times:* "The singles that blare forth from car radios or boom boxes in parks and at the beach are the catcalls of a nation baring its collective skin. With the pop scene in a giddy, fast-moving mood, such quickly fading shout-outs seem more resonant than usual." But America's collective is not homogeneous. So how can one song feel right to all of us?

The only thing that connects Americans during the summer is the weather. The sunshine breeds an incessant need for a beach or proximity to a pool. Produce demands a picnic in the park with a sandwich, chips, and a pickle. The nonstop waves of heat usher in short shorts and bikini tops. Young Americans declare their independence from school, while the employed are looking up the nearest happy hour.

These are the experiences that connect us. Maybe it is the right of every American to dictate what song feels right to them. And maybe sharing your respective summer songs with others is the connection point that America actually needs.

Crumpton is a music, pop-culture, and politics writer from Dallas

LEFT: PHOTO-ILLUSTRATION BY CHLOE DOWLING FOR TIME; SOURCE IMAGES: ATSTOCK PRODUCTIONS/GETTY IMAGES; DEAGREEZ/GETTY IMAGES; XAVIER LORENZO—GETTY IMAGES; TATIANA MAKSIMOVA—GETTY IMAGES; WESTEND61/GETTY IMAGES; VM/GETTY IMAGES; RIGHT: ANTHONY WALLACE—AFP/GETTY IMAGES

THE RISK REPORT BY IAN BREMMER

New stability, and a swing left, in South Korea election result

SOUTH KOREA'S presidential election delivered a resounding triumph for Lee Jae-myung, the veteran center-left leader of the Democratic Party of Korea (DP). His victory on June 3 closes a tumultuous chapter in South Korea's politics marked by former President Yoon Suk-yeol's short-lived declaration of martial law, impeachment, and removal from office. It also ushers in a left-leaning administration with wide latitude to govern, and sets the stage for a dramatic reorientation of the country's domestic and foreign policy.

Lee takes office with a rare advantage in South Korea's often fractious politics: a unified government. The DP holds a majority in the National Assembly until at least 2028, when legislative elections are due, giving Lee power to enact his agenda without the checks, and gridlock, that stymied his predecessor. Though he campaigned on a centrist message to broaden his appeal, Lee's margin of victory will allow him to claim a strong political mandate and govern as a progressive.

A populist shaped by his years as a labor and human-rights lawyer, Lee has long advocated for a stronger state role in redistributing economic gains and curbing corporate power. While structural changes such as sweeping corporate reform face institutional resistance, his administration will push for increased social-welfare spending, higher taxes on corporations and the wealthy, and tighter oversight of Big Business.

It will take Lee weeks to form his Cabinet and his administration won't unveil a detailed policy platform until mid-August. In the meantime, he must stabilize an economy under pressure from weak domestic demand, falling exports, and the threat of higher U.S. tariffs.

U.S.-South Korea trade talks will be Lee's first test. The Trump Administration's 90-day tariff pause expires July 9, at which point they'll rise from 10% to 25% unless there's a new trade deal.

Lee Jae-myung before addressing Democratic Party supporters on election night in Seoul on June 4

Lee has adopted a cautious tone, signaling that he may seek a deadline extension to allow him to benchmark South Korea's deal against those being negotiated by Japan and others. If talks falter, South Korea—whose second largest export market, after China, is the U.S.—would face major headwinds in Lee's efforts to stimulate growth.

Foreign policy is another arena where Lee will chart a distinct course. He has pledged to maintain South Korea's core alliances, but his record suggests a cooler posture toward Washington and Tokyo and a pivot toward Beijing and Pyongyang. Lee criticized his predecessor's overtures to Japan as overly "subservient" and is skeptical of any deeper trilateral security cooperation that binds South Korea more closely to the U.S.-Japan alliance. A friendlier approach to China—which Beijing is all too happy to encourage—would further strain ties with Washington.

AT THE SAME TIME, Lee has expressed openness to restarting talks with North Korea and wants to avoid Seoul's being sidelined if Donald Trump revives his own outreach to Kim Jong Un. But Kim's renunciation of reunification last year and deepening ties with Russia limit expectations for diplomacy. Still, engagement with Pyongyang is one of the few areas where Lee and the U.S. President could find common ground.

After three years of divided government, institutional clashes, and episodic crises, South Korea has now taken a sharp left turn—driven by a President who has the mandate, the parliamentary majority, and the political will to deliver it. His presidency will mark the most cohesive governing era South Korea has seen in years—and possibly the most transformative. If Lee can deliver on even part of his agenda, he will reshape the contours of the country's politics—and its place in the world—for years to come. ◻

The Brief
By Jeffrey Kluger
EDITOR-AT-LARGE

Something strange is going on 15,000 light-years from Earth. Out at that distant remove, somewhere in the constellation Scutum, an unexplained body is semaphoring into space, blinking in both X-ray and radio frequencies once every 44 minutes in a way never seen by astronomers before. The object could be a white dwarf—an Earth-size husk that remains after a star has exhausted its nuclear fuel. Or not. It could also be a magnetar—a neutron star with an exceedingly powerful magnetic field. Unless it's not that either.

"Astronomers have looked at countless stars with all kinds of telescopes, and we've never seen one that acts this way," said astronomer Ziteng Wang of Curtin University in Australia, after the release of a paper he co-authored in *Nature*. "It's thrilling to see a new type of behavior for stars."

ASKAP J1832, the star's technical handle, is by no means unique in the universe in sending out energy in steady flashes. Pulsars—rapidly spinning neutron stars—do too. But pulsars flash much faster than ASKAP J1832 does, in milliseconds to seconds.

In 2022, astronomers discovered a type of object known as a long-period transient which, like ASKAP J1832, sends out flashes of radio waves on the order of tens of minutes. So far 10 such bodies have been found, but none identical to ASKAP J1832, which is the first to emit X-rays too. "Finding a mystery like this isn't frustrating," said co-author Tong Bao of the Italian National Institute for Astrophysics. "It's what makes science exciting."

TIME CO_2 Leadership Report
By Justin Worland
SENIOR CORRESPONDENT

LOOK THROUGH THE NEW FIVE-year outlook from the World Meteorological Organization (WMO), and you won't see the U.N. atmospheric-science body use the words *emergency* or *disaster*. And yet it would be hard for anyone even semi-literate in the science of climate change to flip through it without a sense of urgency and alarm.

The report finds that global temperatures will continue at or near record levels with a possibility that the temperature rise since the Industrial Revolution nears 2°C by 2030. Already, warming momentarily breached 1.5°C in 2024. It's a big marker: decades ago policymakers settled on 2°C as an ideal cap of sorts. That's because at some point between 1.5°C and 2°C, we might expect to begin seeing climate effects that are both dire and, perhaps more important, irreversible. **The WMO report reaffirms that the world has entered that danger zone—and the risks posed by the planet's warming are on the verge of growing dramatically.**

The increasingly dire atmospheric reality, underscored by this new report, might lead to some urgent calls for companies to cut their emissions. Indeed, reducing emissions is the only way to keep the problem from getting worse. But our temperature-rise trajectory should also push companies to take a hard look at how prepared they are for the changes that will come on the road to 2°C—not decades from now but in the next five years.

"We are in a climate emergency, and the situation worsens every year," Sonia I. Seneviratne, a professor at the Institute for Atmospheric and Climate Science of

'We are in a climate emergency, and the situation worsens every year.'
—SONIA I. SENEVIRATNE

the ETH Zurich, told me earlier this year. "It's not necessarily making the headlines, because there are also many other crises, but we shouldn't forget it."

The WMO report outlines a number of alarming predictions for the next half-decade. For the summer season in the northern hemisphere, temperatures are expected to exceed averages in previous decades "almost everywhere." In the Arctic during the northern winter season, the temperature anomaly is likely to be more than 3.5 times as large as the global anomaly. And sea ice is expected to continue to decline across the Arctic.

Between 1.5°C and 2°C, heat waves become more frequent and intense, according to the U.N.'s climate-science body. Crop yields decline. And coral reefs may be wiped out completely. Infrastructure faces increased flood and fire risk. Demand for air-conditioning will stretch electric utilities thin. Farmers and agriculture companies face not only crop losses but also declining worker productivity in the heat and other extreme weather. All of this adds up to a massive headwind poised to slow economic growth. A 2021 report from Swiss reinsurance giant Swiss Re found that 2°C of warming would lead to global GDP that is 11% lower by midcentury.

While a growing number of firms are disclosing the risks posed to their business by the physical effects of climate change, even the most forward-thinking firms find it impossible to fully understand what these hotter temperatures will bring and, therefore, what can be done to prepare. With each fraction of a degree global temperatures rise, the further we get into uncharted territory.

Climate deniers use uncertainty to argue that we should slow our efforts to reduce emissions: Why should we spend trillions to address something we don't fully understand? But the present uncertainty is pretty frightening on its own terms.

JACOPO PAPUCCI—KINTZING/CONNECTED ARCHIVES

Health Matters
By Alana Semuels
SENIOR CORRESPONDENT

AS CONGRESS EYES SWEEPING cuts to Medicaid, the health care program for low-income adults that serves about 20% of people living in the U.S., a new study has a sharp conclusion: cuts to Medicaid will cost lives.

The study, published by the National Bureau of Economic Research on May 5, tracked nearly 40 million people who gained Medicaid through state-based expansions under the Affordable Care Act from 2010 to 2022. It found that during that time, Medicaid expansions increased enrollment and reduced members' risk of death by 2.5%. **People who enrolled in Medicaid because they gained eligibility saw a 20% reduction in their risk of death when compared with people in states who could not access Medicaid.** Medicaid expansions saved about 27,400 lives from 2010 to 2022, according to the study.

Medicaid expansion saved some 27,400 lives from 2010 to 2022

It might seem obvious that expanding access to health insurance will improve people's health. But academics have had a difficult time proving this, says Dartmouth economics professor Angela Wyse, co-author with University of Chicago economics professor Bruce D. Meyer. "This study really does a lot to advance our understanding of the magnitude of this relationship between health insurance and this really important health outcome," Wyse says.

Medicaid expansion saves lives because it allows people to see doctors and access preventive care, including recommendations from doctors about how to improve their lifestyles, she says.

The study, which also found that gaining access to Medicaid reduced the chance of death across demographics, comes as Congress seeks to cut at least $600 million from the program over the next decade.

Though around 70 million Americans are enrolled in Medicaid, the numbers vary tremendously by state. That's because while the Affordable Care Act allowed states to expand Medicaid to more people, offering some funding for them to do so, some states declined. Forty-one states have expanded Medicaid since the legislation went into effect. But 12 have trigger laws in place that would automatically end the Medicaid expansion or require significant changes to the program should there be reductions to the amount of money the federal government provides.

Potential reductions are extremely controversial; an April KFF poll found that 76% of the public opposes major cuts to Medicaid. Even some Republicans are wary. In April, 12 conservative House members wrote a letter to GOP leaders stating, "We cannot and will not support a final reconciliation bill that includes any reduction in Medicaid coverage for vulnerable populations." The question is now in the Senate.

"I feel pretty confident in saying that restricting Medicaid access is going to have the real human cost of having more people die than otherwise would have," Wyse says.

ARMENIA
A Small Nation with Grand Ambitions

Nestled in the shadow of Mount Ararat, Armenia, a compact nation spanning a mere 29,743 square kilometres, is crafting an economic narrative that belies its modest geography. The Caucasus state is exhibiting a nascent dynamism across a range of sectors, warranting closer inspection from international investors.

In Armenia's agrarian heartlands, where traditional farming practices endure, a new breed of agricultural enterprise is emerging. A standout example is Spayka CJSC, which has leveraged this heritage by building a $328 million fruit and vegetable export business that is expanding at a robust annual rate of 17.3%. This transformation underscores a broader trend of modernization within Armenia's agricultural sector, where age-old practices are being increasingly integrated to meet the demands of global markets.

Further north, across the highland vineyards, a 6,000-year-old winemaking tradition is undergoing a significant revival. Government initiatives and foreign investment, totalling $42 million since 2018, are fueling a surge in exports, which have grown by an impressive 200% over the same period. This resurgence positions Armenia as a niche player in the international wine market, capitalizing on its unique terroir and historical legacy.

Beyond its agricultural and viticultural prowess, Armenia's rich cultural tapestry is a powerful engine of economic growth. The nation's 4,100 monasteries and archaeological sites -- far from being mere relics of the past -- attracted 2.12 million visitors last year, generating an impressive $2 billion in revenue, or nearly 12% of the national economy. The government's "Open Skies" policy, a strategic move to enhance connectivity, has welcomed 11 new airlines, effectively opening up this once relatively isolated nation to a wider global audience.

Armenia's financial sector is likewise undergoing a period of expansion. Banking assets have climbed to $13.7 billion, with institutions like Evocabank demonstrating a growing appetite for lending to promising sectors. This ever-greater availability of credit signals a bolstering of the domestic financial system's capacity to support economic development.

The country's burgeoning technology sector is also attracting increasing attention from global venture capital. Inflows of $117 million have fueled a vibrant startup ecosystem, which now employs around 21,000 professionals and generates $815 million in exports. Armenia's recent 17-place rise in the World Bank's Ease of Doing Business index illustrates the concrete results of the ongoing efforts to improve the investment climate. The country's increasingly diverse investment flows -- from the European Union, China, and the United Arab Emirates -- are indicative of a growing recognition of Armenia's potential.

EVOCABANK: A Digital-First Pioneer

In Armenia's dynamic financial sector, Evocabank has followed a remarkable path and is rapidly becoming a key partner for both domestic expansion and international investment. Founded in 1990, the bank's strategic pivot towards a "digital-first" model, coupled with a powerful rebranding effort, has propelled it from being a modest player to the sixth-largest bank in the nation. This dramatic rise underscores Evocabank's innovative spirit and understanding of Armenia's evolving financial landscape.

Karen Yeghiazaryan, chairman of the management board, emphasizes that Evocabank is committed to being a "reliable partner" for global investors seeking opportunities in Armenia. Offering a comprehensive suite of financial services, the bank acts as a hub for international entities from diverse sectors, including financial services, IT, horeca (hotel, restaurant, and café/catering), and manufacturing.

A key driver of Evocabank's rapid ascent has been its early embrace of digital banking. Recognizing that digitalization was paramount, the bank put a "digital-first" ethos at the core of its operational strategy. This has resulted in efficiency, accessibility, and a superior user experience – key traits for international investors accustomed to sophisticated technological solutions.

In a competitive local market of 18 banks, Evocabank's dedication to digital innovation, data-driven services, and AI-powered tools for credit assessment and customer engagement helps it stand out from the rest. The bank's successful rebranding resonates with a new generation of clients and signals a departure from traditional banking norms. As a result, it has been instrumental in winning new clients and establishing Evocabank as a modern and trustworthy institution.

Looking forward, Evocabank's ambition extends beyond Armenia's borders. The bank is building an "ecosystem" of affiliated financial service providers spanning the Middle East, Europe, and North America. This strategic international expansion aims to provide a seamless, "one-stop boutique" service for clients with multifaceted global financial requirements, further solidifying Armenia's connection to the international financial arena.

For international investors drawn to Armenia's promising economic trajectory, Evocabank can serve as a vital bridge. With a deep understanding of the local market, support for SMEs (the engine of Armenia's economic growth), and a commitment to cutting-edge digital solutions, the bank is well-positioned as the ideal partner for capitalizing on the diverse opportunities in Armenia, from export-oriented industries and agricultural processing to tourism and technology.

Karen Yeghiazaryan,
Evocabank Chairman of the Management Board

The Airport Effect: Transforming Armenia's Economic Landscape

From the rugged peaks of Mount Ararat to the bustling streets of Yerevan, Armenia is a country of extraordinary charm and appeal. Businessman Eduardo Eurnekian is on a mission to transform the nation's economic landscape through a tapestry of strategic investments. His commitment to the country is multi-faceted and intended to stimulate a thriving and modern Armenia. This dedication is rooted in his Armenian heritage, a powerful driving force that has guided his investments and is shaping both his own legacy and the country's prosperity.

The development of Zvartnots International Airport is one of the cornerstones of Eurnekian's vision, where his proposed $400 million investment will double the airport's capacity. As the airport CEO Marcelo Wende explains, "The new Armenia International project would duplicate the size of the airport. It is very much needed due to the high demand, and to facilitate the entry of new airlines. It would enable more destinations and more tourists to come to our country, and it is also planned to adopt digitalization for (immigration processing) using biometric tools."

In addition to enlarging the airport's footprint, says Wende, "This expansion is not just about increasing physical space, it's about enhancing the entire passenger experience, streamlining operations, and positioning Zvartnots as a vital hub in the region -- a gateway that reflects the nation's ambitions on the global stage."

Zvartnots International Airport has experienced a surge in passenger traffic, with international arrivals increasing from approximately 2.6 million in 2019 to over 5.1 million in 2023. "We have experienced an almost 100% increase in passenger numbers over the last three years," says Wende. This unprecedented boom in arrivals is a reflection of Armenia's increasing connectivity and growing appeal for both business and leisure travellers.

The airport expansion plans will not only double the terminal's size but also involve a significant upgrading of the cargo terminal, demonstrating Eurnekian's commitment to facilitating trade and commerce. On top of that it will further bolster Armenia's role in the regional economy. "The airport is a mirror reflecting the nation's economic health," says Wende.

Eduardo Eurnekian
Founder of Zvarnots International Airport

Plans for the airport's transformation reflect Eurnekian's understanding that a modern, efficient gateway to the country is essential for a nation aspiring to greater global integration. But it is not the only large construction project Eurnekian is undertaking to change the physical landscape of the country. The former ministry of foreign affairs building in Yerevan, which Eurnekian purchased in 2012, is being transformed by award-winning British architect Norman Foster and will bring offices, hotels, shops, restaurants, and green areas to the capital's Republic Square.

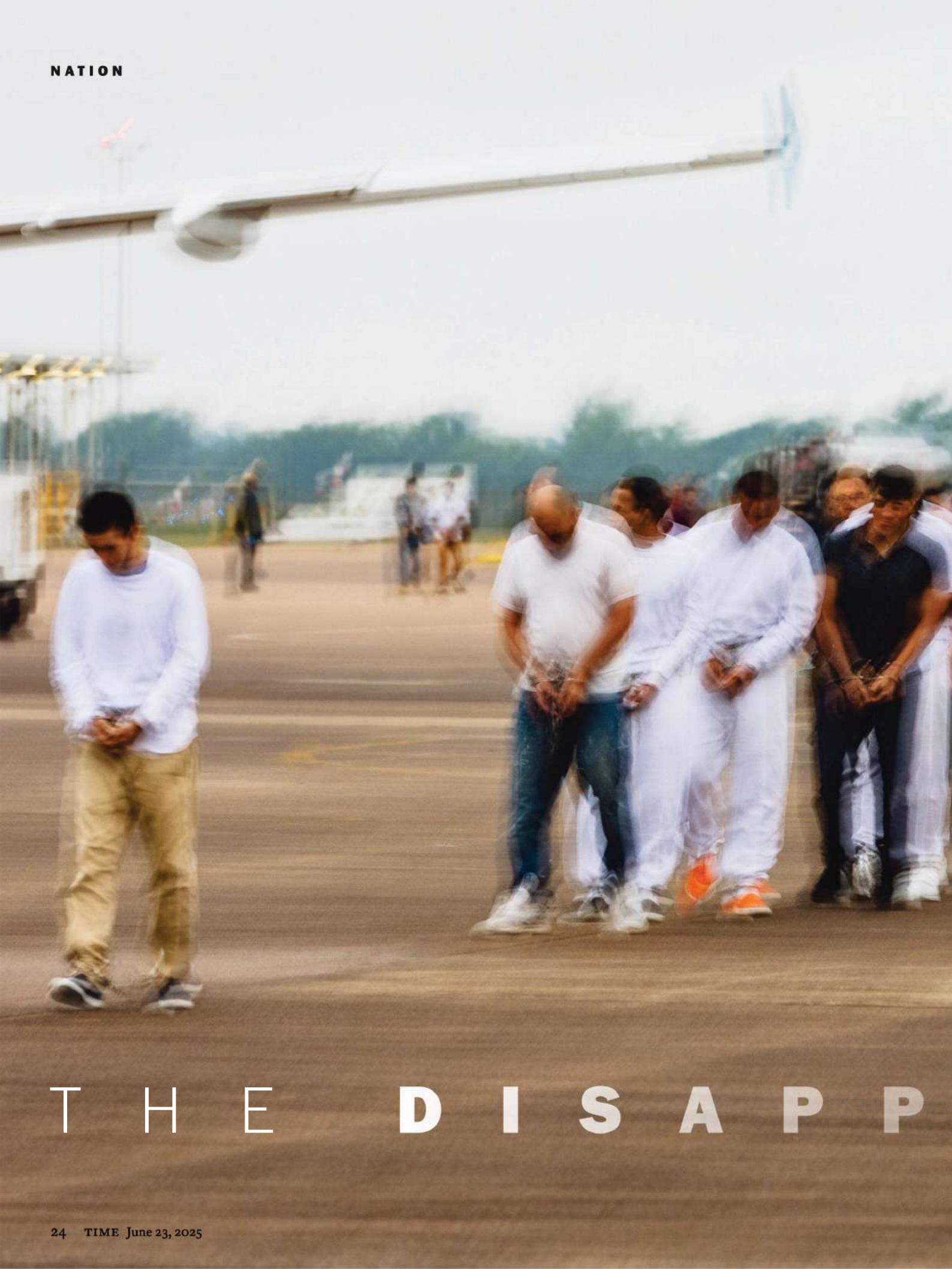
Eurnekian's acquisition and revitalization of Converse Bank show his dedication to modernizing Armenia's financial sector. Armenia's banking sector, of which Converse Bank is a key player, has seen a significant increase in assets in recent years, growing from approximately $13.5 billion in 2019, to $23 billion in 2023. Characterized by increasing digitalization and a focus on retail banking, the sector is navigating the challenges of a dynamic regional landscape. Converse Bank stands as a significant player within this ecosystem, contributing to its stability and growth. The bank, in essence, is a financial anchor, supporting the nation's economic development and providing a secure environment for attracting the foreign investment needed for economic growth.

Eurnekian's passion for Armenia also extends into its rich cultural heritage, exemplified by his investment in Karas Wines. With roots in the fertile lands of the Armavir region, the company represents a revival of Armenian winemaking traditions, a testament to the nation's agricultural potential and its cultural heritage. This ambitious project, encompassing 7,500 acres, has produced award-winning wines, while creating hundreds of jobs, revitalizing rural communities, and fostering economic opportunity. Karas Wines makes up a substantial portion of Armenia's export-oriented wine sales, producing an estimated several million bottles annually and contributing to the nation's overall output. The sector has seen growth of over 20% in the past three years.

Karas wines are now enjoyed across the globe, serving as ambassadors of Armenian quality and craftsmanship. Their presence showcases the nation's ability to compete on the international stage. The brand's success has spurred the growth of a thriving wine industry, transforming Armenia into a destination for wine enthusiasts and further solidifying its place on the world stage -- while demonstrating the nation's ability to diversify and grow.

Eduardo Eurnekian's contributions to Armenia exemplify the power of vision, dedication, and a deep connection to one's roots. His investments, which span infrastructure, finance, and culture, have created a lasting legacy and are helping transform Armenia into a modern, thriving nation with a bright future. A nation that is increasingly attractive to investors and poised for sustained economic growth.

ZVARTNOTS



THE DISAPP

DETAINEES BOARD AN ICE DEPORTATION FLIGHT ON MAY 29 IN ALEXANDRIA, LA.

E A R E D

INSIDE THE TRUMP ADMINISTRATION'S DEPORTATION PROGRAM

BY ERIC CORTELLESSA AND BRIAN BENNETT

PHOTOGRAPH BY CHRISTOPHER LEE FOR TIME

"PAY ATTENTION TO THE NOISE," SAYS BELARMINO GARCIA, THE WARDEN OF EL SALVADOR'S TERRORISM CONFINEMENT CENTER.

He ushers a group of foreign visitors inside CECOT's Module 8, a unit unlike others at the sprawling facility situated at the base of a volcano. This one holds 238 Venezuelan nationals who were shipped from the U.S. on March 15 to be held in one of the world's most infamous prisons at the behest of President Donald J. Trump.

The cacophony is overwhelming. Inmates climb out of their bunks, lean on the bars, and plead and whistle for attention. Module 8 is different from a typical CECOT unit in several ways, Garcia explains. The detainees are allowed blankets and pillows. They eat fast food. They are rambunctious and defiant. As the warden leads the visitors out, the prisoners appear on the verge of mutiny, chanting *"Libertad! Libertad!"*

Next, Garcia takes the visitors into Module 7. It's silent inside. The prisoners are Salvadoran nationals, some of whom have been at CECOT for years. They wear white shirts, white shorts, and face masks, and sit upright, staring blankly through the bars. Their cells contain nothing but a *pila*—a tub they use as a toilet—and bare steel bunks. Inmates spend all day inside, emerging only for 30 minutes of calisthenics or Bible study, according to the warden. There are no TVs or radios. The prisoners can't make or accept phone calls. They can't receive visitors, or even letters. They have spoken to no one outside the prison since their arrival. Staff remind them what El Salvador's President, Nayib Bukele, has said publicly: No one who goes into CECOT will ever come out. "They have lost the will to fight or resist us," Garcia says.

The prospect of the U.S. sending migrants to a foreign prison notorious for alleged human-rights violations would have been unimaginable less than a year ago. But it is only one dramatic component of Trump's unprecedented deportation project. The President has revoked the temporary legal status of hundreds of thousands of people and expanded the power of Immigration and Customs Enforcement (ICE) to round up and remove millions of others. He is authorizing ICE to direct a network of law-enforcement agencies, from the FBI and the Bureau of Alcohol, Tobacco, Firearms, and Explosives to the DEA and U.S. Park Police, to assist the effort. He has pressed the Internal Revenue Service and the Postal Service to share information to identify targets. Homeland Security Operations has developed new software technology, called RAVEn, to consolidate data about migrants. Trump has used federal powers to coerce cities and counties to cooperate with the mission and threatened to withdraw federal funding if they don't. Working with sheriffs and local police departments, ICE has raided schools, parks, and restaurants across the U.S., detaining some 82,000 people in a few short months.

The work is only beginning. The Department of Justice is weighing arresting and prosecuting public officials who impede their immigration agenda, according to Administration sources familiar with the matter. The White House is considering suspending habeas corpus, a protection against illegal government detention enshrined in the Constitution that grants every person the right to have a judge review their imprisonment. "We're looking at every option," Trump border czar Tom Homan tells TIME. In addition to sending

PHILIP HOLSINGER

▲ VENEZUELAN MEN DEPORTED FROM THE U.S. ARE HELD IN CECOT PRISON ON MAY 9

Venezuelans to CECOT, Trump has deported asylum seekers to Panama and sent others to Guantánamo Bay in Cuba and South Sudan. Homan says the Administration is in talks with three more countries to accept U.S. deportees. It also plans to build and expand other detention centers in the U.S., he says, with the goal of doubling capacity to hold detainees awaiting deportation to 100,000. So far, the Administration has deported more than 139,000 migrants, which is behind pace to reach Trump's aggressive targets. Even so, the number in immigration detention has spiked 30%.

This sweeping effort has few analogues in recent world history. Its ambition goes beyond anything attempted in the U.S. since the Eisenhower-era Operation Wetback in its aims to expel millions of people and change the makeup of the country. Removing that many undocumented immigrants, as Trump has promised, would eliminate a key source of labor. It would end a decades-long wave of migration that has made the country progressively more multiethnic. And it would change how the U.S. has treated those seeking refuge from violence and oppression since before the end of the Cold War.

Trump officials say all this is overdue. The U.S. experienced a surge in migrants, including undocumented immigrants, under President Biden, who revoked some of Trump's first-term border policies. Trump officials say they intend to reverse a trend that has displaced American workers, depleted state and local governments of resources, and, they argue, undermined social cohesion.

Already, Trump's deportation program is instilling fear in newcomers. "I can't go back," says Hilda Espinoza Telon, a refugee from Guatemalan gang violence, whose lawyer says she was recently fitted with an ankle monitor by ICE. "Nearly my whole family has been murdered over there." She has given her 14-year-old son instructions for what to do if she disappears from their Virginia home.

A TIME investigation, based on interviews with more than 20 Trump Administration officials, exclusive access to detention facilities in the U.S. and abroad, and conversations with numerous migrants, immigration experts, and attorneys reveals how Trump is testing the moral and legal extremes to which the government is willing to go. Catholic bishops and Republican-appointed judges have joined those speaking out against his deportation project. District courts have issued injunctions. Constitutional scholars have alleged Trump's team is not only abusing presidential power but also breaking laws. "The Administration is treating immigration not as a law-enforcement matter but is trying illegally to repurpose the tools of war and counterterrorism against migrants," says Brian Finucane, a lawyer at the independent International Crisis Group and former State Department official. "It's a turducken of illegality."

Trump Administration officials say they are complying with all laws they deem constitutional. Whether they are correct will ultimately be decided by the Supreme Court, which has halted some of Trump's actions while the Justices consider the merits. But moves to slow or reverse his agenda have only hardened the President's resolve. "We have to do it," Trump told TIME in late April, arguing he had been elected on a promise to crack down on illegal immigration. "People have been let into our country that are very dangerous." As the Administration escalates its efforts, critics are asking how we got here. Others wonder what took so long. But all Americans have a stake in understanding how Trump is trying to transform the country by deporting millions of its inhabitants—and what it will mean for their communities.

WHEN CRISTIAN DAVID MARIN LEIVA stepped inside the South Louisiana ICE Processing Center in New Orleans on April 14, he thought his appointment would take only a

few minutes. The agency had summoned Cristian, a boyish teenager with bright eyes and a patchy goatee, for a regular "check-in." He had reported for check-ins twice previously without incident—most recently in February—since he crossed the Texas border illegally in April 2021. Cristian moved to the U.S. to escape violence in Honduras, he says, settling with his father and stepmother in Slidell, La. "Where I lived was full of gangs," he says. "They would make the minors join the gang or be killed."

Shortly after he crossed the border, he hired a lawyer, who asked a judge to designate Cristian a Special Immigrant–Juvenile. He had been abandoned by his mother in Honduras, his attorney says, and needed to live with his father in the U.S. The judge approved the petition and granted Cristian four years of "deferred action from removal," providing a reprieve from deportation at least until 2027.

Now a high school junior, Cristian, 18, walked into the ICE office near the French Quarter around 7 a.m., planning to make it to school in time for his first-period biology class. He approached an officer and handed him the letter requesting a check-in. The agent glanced at the paper, furrowed his brow, and then looked back at Cristian. He pulled out a pair of handcuffs. "Follow me," he said.

Cristian was led into a small holding cell with dozens of detainees and stripped of his possessions. "They just called me over and put these on me and kept me here," he told TIME, shackled at his wrists and ankles. Agents told him he could make a phone call after he was transferred to a processing center in Central Louisiana. There he could choose either to voluntarily board a flight to Honduras or face a judge. Nobody informed Cristian's family what was happening. Rubin Marin, Cristian's father, was oblivious when TIME reached him by phone later that afternoon. He thought his son was in school.

Summoning migrants for unexpected detention is one in a range of tactics the Trump Administration has adopted. The message sent is clear: Migrants who entered the country illegally are not only unwelcome but also at risk of sudden removal or imprisonment wherever they are and whether they've followed the law since arriving or not. "It's just getting them the hell out of here," Homan says.

To understand how the deportation dragnet works, TIME joined ICE officers on a pair of morning raids in the New Orleans area. Inside a truck, ICE officers reviewed files on their targets, including biometric data, arrest and conviction records, work histories, and frequent whereabouts. "We surveil them for a period of time to identify patterns of behavior," says Mellissa Harper, director of the New Orleans field office. "Once we know that they are at a certain location at a certain period of time regularly, we plan out an enforcement operation."

▲ CRISTIAN MARIN LEIVA, 18, WAS ARRESTED IN APRIL AT AN ICE CHECK-IN

▶ AN ICE AGENT INTERVIEWS A DETAINEE IN NEW ORLEANS ON APRIL 14

The raids TIME witnessed didn't lead to arrests. In one case, the person had left the state overnight. In another, they simply weren't home. But the target list has multiplied. When he took office, Trump revoked the temporary protected status of hundreds of thousands of migrants and rescinded memos that limited ICE arrests during raids. Before that, "if we conduct a targeted enforcement operation for one guy and we show up to his house and there are four other illegals there, we could only arrest the one guy," explains Scott Ladwig, Harper's deputy. "Now we grab them all."

Local police have lined up in support, transferring migrants they arrest on other alleged crimes or even traffic violations. After the fruitless predawn raids on April 14, the ICE officers returned to the New Orleans field office to find 12 migrants transported from the Kenner, La., police department. The detainees walked in a single-file line, wearing handcuffs and leg restraints. When they reached the offices, ICE agents interviewed them using a Spanish translation app on their government phones.

CRISTIAN, RIGHT, SAYS HE MOVED TO THE U.S. IN 2021 TO ESCAPE VIOLENCE IN HONDURAS

One of the detainees, Fernando Milla, 28, had been arrested on suspicion of drunk driving. The officer who ran his license, Milla says, saw he had overstayed a student visa. After two nights in the county jail, police transferred Milla, a Honduran national, to ICE custody. Sitting inside a holding cell, Milla was resigned to his fate. "I'm not going to hire a lawyer or anything," he tells TIME. "I'm going back."

As the migrants in Milla's group were being questioned by the ICE agents processing their paperwork, Cristian emerged from the holding cell. He spent 16 minutes answering questions from an officer. Then he was left waiting again, hoping he ends up back with his father and not on a flight to Honduras.

THE DETENTION OF MIGRANTS like Cristian is the first link in Trump's new deportation chain. It's the product of years of planning. Trump left office in January 2021 determined to make immigration a centerpiece of his political comeback. Top aides found refuge at friendly think tanks to plot the next steps. Homan, who was acting ICE director in Trump's first term, took residency at the America First Policy Institute and the Heritage Foundation, where he contributed to the latter organization's manifesto for a second term, titled Project 2025. Russell Vought, the Office of Management and Budget director, founded the Center for Renewing America, where he studied Trump's rally speeches and devised plans to turn promises into policy. Longtime adviser Stephen Miller, an architect of Trump's first-term immigration crackdown that included separating families, founded America First Legal to sue the Biden Administration, and explored legal mechanisms for Trump's deportation goals.

Together they sketched the contours of a new, even more aggressive immigration agenda. It would concentrate power in the Oval Office and use federal powers to pressure state and local jurisdictions, withholding funds for sanctuary cities and forcing agencies with access to sensitive data to assist in the deportation effort. Vought and others suggested pulling federal funding from state and local police departments that refused to cooperate. Miller proposed declaring a national emergency to invoke extraordinary powers to round up and remove migrants. Homan wanted to restructure ICE, reassigning employees with desk jobs to conduct field operations and ramping up the agency's capacity to identify and arrest people.

'IT'S LESS DETERRENCE. IT'S JUST GETTING THEM THE HELL OUT OF HERE.'

—**TOM HOMAN,** BORDER CZAR

They looked for ways to move fast, and studied the law to devise the methods and legal defenses for their most boundary-pushing measures, according to several current

CHRISTOPHER LEE FOR TIME (3)

ICE OFFICERS IN NEW ORLEANS HAVE STEPPED UP SEARCHES AND RAIDS

Administration officials. Working with Miller at America First Legal was Gene Hamilton, the principal author of Trump's controversial family-separation policy, according to a January 2021 Justice Department inspector general report. All four men now work out of the White House. "The President and the entire Administration are certainly open to all legal and constitutional remedies to ensure we can continue with the promise of deporting illegal criminals," White House press secretary Karoline Leavitt said.

Just how "legal and constitutional" the White House actions are is a matter of dispute. Normally, Executive Orders are vetted by experts at the Office of Legal Counsel at the Justice Department, in order to ensure the President is following the law. Trump has reportedly curtailed that front-end review, leaving government lawyers to defend controversial claims of powers granted to the President only in extreme circumstances, like wartime. Asked to illustrate how this approach to following the law differs from the norm, one litigator who left the Justice Department in February tells TIME, "Draw a horse and put a cart in front of it."

Even those willing to advocate for the broadest presidential powers in pursuit of deportations have found themselves out of a job. Erez Reuveni, a veteran federal litigator who had defended in court Trump's 2017 ban on travelers from Muslim-majority countries, was fired after Reuveni told a court the Administration had mistakenly sent a Salvadoran man named Kilmar Abrego Garcia to CECOT because of a clerical error. The Department also placed on leave Reuveni's supervisor, August Flentje, who had defended Trump's family-separation policy in court in 2018. Traditionally, Justice Department lawyers have been required to keep their distance from the White House to avoid the appearance of politicization. Attorney General Pam Bondi, by contrast, has emphasized "zealous" advocacy of Trump's agenda. "Any attorney who fails to abide by this direction will face consequences," Bondi said the day after Reuveni's court appearance.

EIGHT HOURS AFTER HIS ARREST, Cristian was sent to the Central Louisiana ICE Processing Center in Jena, La., about four hours from New Orleans, on the edge of a forest of loblolly and longleaf pines. The facility, which holds nearly 1,200 inmates, is run by the private corrections company GEO Group, a Trump donor for which Homan worked as a paid consultant. Most days, the prison is quiet, though on occasion hundreds of protesters show up to demand the release of its most famous inmate, Mahmoud Khalil, a Columbia University graduate student whom the Trump Administration arrested without a warrant in March for his role in the campus' pro-Palestinian protests, and has accused, without supplying evidence, of "activities aligned to Hamas."

When TIME visited the Jena facility on May 29, nine landscapers in lime green shirts sat in the intake room on long benches, waiting their turn to be formally admitted. Their shirts read TWIN SHORES LANDSCAPE & CONSTRUCTION SERVICES. Two days earlier, they had been starting a project on the Mirabeau Water Garden construction site in New Orleans, part of a $30 million federally funded drainage project to reduce flooding in the area. At 7 a.m., ICE officers surrounded the site, blocking the exits to the park, as a government helicopter hovered overhead.

Donald Tercero, 36, was among those arrested. Tercero, who is Nicaraguan, had worked on farms and as a teacher before arriving in the U.S. in 2022. He presented himself to the Border Patrol at McAllen, Texas, seeking humanitarian parole under a program the Biden Administration had started that year. He's not planning to fight his deportation. "I want to go back," Tercero says.

Manuel Carillo, a 29-year-old from Guatemala, was also among the construction crew arrested in the New Orleans ICE raid. "Not everyone wants to do the work we are doing," he says. "Unfortunately, Donald Trump doesn't want us to stay." Jimmy Bingham, the warden at Jena, says fewer detained migrants are resisting deportation these days. "They don't feel like it's worth their time to fight," Bingham says.

Upon admission, inmates are given colored uniforms—red and yellow garb for the most serious felonies, green and orange for lesser offenses, blue for those with no conviction. They are separated according to these classifications and housed in dorms that hold 80 people apiece, with showers, phones, televisions, and a gaming system. They get two hours for recreation in the morning and another two hours in the

CHRISTOPHER LEE FOR TIME

afternoon, says the prison administrator. When TIME enters one of the dorms, a group of inmates rushes over, asking to tell their stories. Some had been there a few days, others a few weeks, and some even a few months as they waited to have their cases heard. The lucky ones are granted bond and can return home until a judge is ready to determine their fate.

Jena is one of around 200 ICE detention facilities across the U.S., but agency officials like to send prisoners there for a few reasons. It's cheaper to detain migrants in Louisiana than in other parts of the country, and the state has a conservative federal Circuit Court that's more likely than some others to rule in the government's favor when it seeks a removal. Jena is also located near the Alexandria Staging Facility, a small airport managed by GEO. On average, the Alexandria facility flies six planes a day to other countries, says Ragan Lewis, an ICE officer who runs the airport. Some days see as many as 12 outgoing flights. As a plane loaded up with prisoners, Lewis waved his hand toward a stretch of grass next to the airfield. If there were money to expand the holding cells, he says, he could fit 2,000 people there. Lewis hopes the broad legislative package moving through Congress will allocate funding to expand the Jena facility to house more migrants, who could then be flown out of the country on planes from Alexandria.

Just after dawn on May 29, the swish of chains dragging on asphalt was loud enough to be heard over idling engines. Roughly 70 men shuffled across the tarmac toward a chartered jet that would take them to Nicaragua. Before boarding, guards patted each down, looking for hidden weapons, unlocking and relocking their restraints, and directing them to make the awkward ascent up the stairs to the plane. One of the men, wearing a black hoodie, shook the chains around his wrists at a guard and said, *"Como perros! Como perros!"* (Like dogs.) Once the detainees were on board, agents brought in a van with dozens of women, also manacled, to board next. Then came the only migrants without chains: family units. A woman with her teenage son got on first, followed by a woman with her young daughter. By the time the flight lifted off, there were 118 passengers on board.

Whether Cristian will end up on one of these planes isn't yet clear. In May he was let out of Jena on a $4,000 bond. He is due back in immigration court in New Orleans on Sept. 2 to find out whether he will be sent back to Honduras or can remain in the U.S. with his father.

THE DEPORTATION CHAIN in Louisiana exemplifies a nationwide operation that is redefining American immigration policy, legally and morally. The fallout is reaching far beyond those who entered the country without permission. Law-enforcement officials have snatched foreign students off the street for engaging in speech the Administration doesn't like. Trump has revoked student visas and put foreign students into deportation proceedings without warning. "A visa is a gift," Secretary of State Marco Rubio told reporters on March 28. "No one is entitled to a visa."

Trump is targeting younger children too. His attorneys have argued in federal court that he should be allowed to ignore the 14th Amendment's guarantee of citizenship for those born in the U.S. and terminate the rights of children born to parents who were in the country illegally. The President has cut federal funding to social-service nonprofits that offer legal representation to people facing deportation to ensure their cases are fairly decided. "The very idea of deporting a child without a lawyer should be unthinkable in America," says Jojo Annobil, the CEO of the Immigrant Justice Corps.

'NOT EVERYONE WANTS TO DO THE WORK WE ARE DOING.'

—**MANUEL CARILLO,** CONSTRUCTION WORKER

Perhaps no other issue has crystallized criticism of Trump's immigration agenda like the deportation of Venezuelan nationals to El Salvador. Like many of Trump's policies, it came about through a series of conversations, rather than a conventional legal process. On the campaign stump, Trump occasionally castigated Bukele, the Salvadoran President, for sending MS-13 gang members to the U.S. Trump ally and former Florida Congressman Matt Gaetz, one of Bukele's biggest American fans, told Trump that this wasn't true.

A DEPORTATION FLIGHT PREPARES TO LEAVE ALEXANDRIA, LA., ON MAY 29

Bukele was the most popular leader in Latin America, he told Trump, and attacking him wasn't going to help win over the Hispanic voters Trump was courting.

When Gaetz visited El Salvador for Bukele's second inauguration last summer, he and Bukele discussed the idea of the Salvadorans holding some of the migrants whom Trump planned to deport if he won. When Gaetz returned, he tells TIME, he brought the idea to Trump and his team. Shortly after taking office, Trump directed Rubio to cut a deal with Bukele, two senior White House officials say. Rubio came back with an offer in hand, according to U.S. officials: $20,000 per prisoner for a year.

There were wrinkles in the deal. Bukele wanted the Trump Administration to send a handful of Salvadoran MS-13 members held in U.S. prisons, including some who the Treasury Department alleged in December 2021 had engaged in secret negotiations with officials of Bukele's government. At the same time, the deportations would require claims of extraordinary presidential powers. Miller and the White House Counsel's office planned to invoke the Alien Enemies Act, a 1798 law that grants the President wartime authority during an invasion or "predatory incursion." The plan was so closely held that only a few senior members of the Administration knew it was happening, one of them tells TIME.

On March 15, the Trump Administration sent 238 Venezuelan nationals to El Salvador, alleging they were gang members or terrorists. Some had recently been arrested. Many of them had not been convicted in U.S. court. The Administration invoked the Alien Enemies Act for the fourth time in U.S. history, and the first since World War II. The declaration was made at 3:53 p.m. The flights for El Salvador were scheduled for 5:26, 5:44, and 7:36 p.m.

Prompted by an emergency motion from the American Civil Liberties Union and Democracy Forward, U.S. Judge James Boasberg ordered a virtual hearing on the matter for late that afternoon. Boasberg heard arguments, then ordered the government to halt the removals. "Whether turning around a plane or not embarking anyone on the plane, or those people covered by this on the plane, I leave to you," Boasberg told the DOJ. "But this is something that you need to make sure is complied with immediately." Yet two planeloads of migrants had already left ahead of schedule. A third one was still on the tarmac at a Texas airfield, but took off anyway.

The Trump Administration has not confirmed the names of the Venezuelans on those flights. Nor has it shown evidence that all of the men belonged to the criminal gang Tren de Aragua. A review by the Cato Institute found that more than 50 of the Venezuelans sent to El Salvador had followed legal steps to enter the country. A CBS News investigation found that most of the Venezuelans had no criminal record in the U.S. or abroad.

One of the men on the planes was Abrego Garcia, who the Justice Department would later admit had been mistakenly deported. Another was Franco Caraballo Tiapa, who worked as a barber in Venezuela. In 2023, Tiapa and his wife Johanny trekked across the Darién Gap, sleeping in the open and surviving on scraps of discarded food, until they presented themselves at the U.S. border and asked for asylum. The two lived together in Sherman, Texas, where they made money cutting hair.

On Feb. 3, Tiapa visited an ICE office in Dallas for a regular check-in. This time he was arrested, according to Johanny. The Administration says his tattoos show he's a member of the Tren de Aragua gang. One is of his daughter's name. Others depict a lion; a rose; and a razor blade on the side of his neck—a symbol of his work as a barber, according to his wife. She says he has no criminal record in the U.S. or Venezuela. "They were only looking at his tattoos," Johanny says.

OUTSIDE OF CECOT'S MODULE 7, Garcia, the warden, brings out a Styrofoam container with a hamburger, French fries, ketchup packs, and Milano cookies. This is a typical meal for the Venezuelan inmates, he says. Their diet was devised by Bukele, who instructed they be fed fast food to gain weight, as a way of trolling critics who argue CECOT's conditions are inhumane, according to Salvadoran sources. "It's a cat-and-mouse game," says one person close to Bukele. The maneuver is similar to the photo op Bukele staged when Democratic Senator Chris Van Hollen traveled to El Salvador to meet with Abrego Garcia. The pair were photographed sitting poolside with what Van Hollen said were "fake" margaritas. (Abrego Garcia was returned to the U.S. in early June.)

'IT'S A TURDUCKEN OF ILLEGALITY.'

—BRIAN FINUCANE, ATTORNEY AT THE INTERNATIONAL CRISIS GROUP, ON TRUMP'S DEPORTATION PROGRAM

After the tour of the prison, Garcia allows TIME to interview one inmate in a holding area near the unit's entrance. The man says his name is Hector Hernandez. He appears to be the nightmare that Trump has conjured time and again on the campaign trail. He says he is an MS-13 member, and has tattoos all over his body, from his face and neck to his forearms. The prisoner claims that before he was deported in 2019 and apprehended by Salvadoran authorities, he murdered 50 people in Northern Virginia—more than three times the number of reported murders in Prince William or Fairfax counties for that year. TIME was unable to verify the details provided by the prisoner, including his name, his alleged crimes, or how he came to be there. Inside CECOT, the extreme terminus for Trump's deportation program, the truth, like everything else, is under the control of the authorities.

What is clear, however, are the draconian conditions to which the Salvadoran inmates at CECOT are subjected. They are under constant surveillance. The lights never go off. They share cells with rival gang members. Prisoners who get out of line face up to 14 days in pitch-black solitary confinement, says Garcia. For the past 2½ years, the man who identifies himself as Hector Hernandez says, he's had no communication with the outside world. He hasn't spoken to family. He hasn't seen or read a news report. He doesn't know who the President of the United States is. —*With reporting by* HARRY BOOTH, LESLIE DICKSTEIN, *and* THARIN PILLAY

CHRISTOPHER LEE FOR TIME


EXIT
TO OPEN
DANGER

Traditional fishing boats in Aurora province, which was hit by Typhoon Man-yi

PHOTOGRAPHS BY JOSHUA IRWANDI FOR TIME

Scrambling To Survive

FILIPINO FISHING FAMILIES CONFRONT THE WORLD'S CHANGING RELATIONSHIP WITH THE SEA

BY CHARLIE CAMPBELL AND CHAD DE GUZMAN | THE PHILIPPINES

It's around 10 a.m. each morning that Noemi Reyes' heart fills with hope.

That's when her husband Marionito's boat appears on the shimmering horizon of the Pacific. By the time his skiff has been hauled onto the shingle beach, it's already clear whether his toil has been profitable. Today was not: just eight small sardines and mackerel from five hours casting handlines at sea. "Almost nothing," laments their 11-year-old son, Cjay, as he clambers back up the slope to their shack.

The catch is sufficient to provide the family a proper meal but won't help rebuild their home, which was destroyed late last year when a record-breaking six consecutive storms battered the Philippines. Ever since November, the Reyes family has lived here, beneath tarpaulin and nipa palm, wedged between crashing waves and a coastal highway in northeastern Luzon. When it rains, water gushes through gaps in the roof. At night, passing juggernauts rattle the structure, shaking them from their slumber. With no locks or even doors, passing strangers sometimes wander inside.

"I find it hard to sleep and worry that one of the trucks might hit us," says Noemi, 42, as she cleans and guts the fish for traditional *sinigang* sour soup.

It's a precarious existence that is all too common in the Philippines, an archipelago nation of 115 million people scattered across more than 7,000 islands. The sea remains the lifeblood of the country. Fishing employs over 1.6 million people, whose catch is the nation's principal protein source, a daily bounty of some 12,000 tons. But it's a relationship that has become increasingly strained. Intensifying typhoons and dwindling catches are transforming what has always been the font of life into a source of destruction and despair.

"Sometimes the sea is all about luck," shrugs Marionito, 50, as he collapses exhausted onto the timber platform that sleeps the couple and five of their nine children.

If fortune has deserted the Reyes family, odds are increasingly stacked against all the 600 million people around the globe who depend on small-scale fisheries and aquaculture. Coastal communities from Bangladesh to Cuba and from Senegal to Vanuatu are finding their livelihoods and security increasingly challenged. Rising greenhouse gases are increasing the intensity of extreme-weather events that both reduce fish stocks and make accessing them more difficult and dangerous for this generation and the next.

"Coastal communities are on the front lines, facing rising seas, brutal storms, and tidal surges that destroy millions of homes, businesses, public infrastructure," Simon Stiell, executive secretary of the U.N. Framework Convention on Climate Change, and a former senior government minister of Grenada, tells TIME. Stiell is no mere onlooker. Just last July, Hurricane Beryl devastated his home island of Carriacou, where 98% of homes and buildings were severely damaged or destroyed, displacing over 3,500 people.

Society's most vulnerable are bearing the brunt, especially the young. UNICEF estimates that around the world, an average of 20,000 children are displaced every day, 95% by the same floods and storms that render coastal fishing communities increasingly hazardous. And the Philippines has the dubious distinction of hosting the most child climate

From left: The Pioquinto family; a basketball court destroyed by Typhoon Man-yi; the Reyes family

refugees. According to UNICEF, the Philippines experienced a record 9.7 million child displacements from 2016 to 2021, owing partly to 60% of the population living by the ocean—more people than live in Canada—as well as sea levels rising at up to four times the global average.

"Children are seeing their schools flooded, health services and water systems damaged, and crops and other food sources washed away," says UNICEF executive director Catherine Russell. Along with a litany of health risks including malnutrition and waterborne disease like cholera and dengue, displaced youngsters suffer disrupted education and are more likely to drop out of school to support their families, meaning fewer opportunities for them to build more prosperous and secure lives than those of their parents, whose own occupations are ever more fraught.

"Constant threats of displacement create chronic anxiety and trauma, particularly among children," says Gwendolyn Pang, secretary general of the Philippine Red Cross. "There's no semblance of normalcy because they constantly move, evacuate, relocate. Frequent disasters become emotionally and mentally exhausting."

The cascade of hardships stands to compound a larger peril. Each pound of fish caught by wild fisheries involves just ½ to 3 lb. of carbon, while red-meat production ranges from 15 to 50 lb. But the tropics are predicted to see communities displaced from the coast to cities, and declines in potential seafood catch of up to 40% by 2055, turning coastal populations from sustainable food producers into urban consumers with an exponentially larger carbon footprint.

In response, governments, NGOs, and the local people are striving to instill resilience into coastal communities, strengthen homes and infrastructure to better cope with extreme weather, and diversify incomes to mitigate the impact of a changing climate. But providing future generations with greater prospects than the last is an uphill battle.

"What people told me is simple: they want their families, their wider communities, their businesses and livelihoods to be better protected," says Stiell. "They want to focus on education, health care, economic opportunity—not have to scramble to survive the next storm."

FEW NATIONS HAVE INTERNALIZED the ocean like the Philippines. For centuries before Ferdinand Magellan first set foot here in 1521, the inhabitants were natural seafarers, docking on its islands and thriving aboard floating communities on boats called balangay, a word that today has come to mean the country's smallest political unit, or village.

Filipinos make up over a quarter of the global seafaring worker community. Put differently, 1 out of every 5 Filipinos currently employed abroad are working on the water. Manila remains one of Southeast Asia's top ports, while the surrounding waters, including those within the hotly contested South China Sea, teem with oil and gas deposits.

But this kinship with the ocean has also made the Philippines acutely vulnerable to the extreme weather that is becoming both more fierce and frequent. Situated in the Pacific's "typhoon belt," the Philippines experiences an average of 20 tropical cyclones annually, most occurring from July to October. Typhoons are known as compound events,

since low pressure effectively sucks up seawater to inundate land just as heavy rainfall surges down hillsides and high winds batter homes and infrastructure.

"The coast is really where all the problems meet and the intensity is increasing," says Robert Vautard, a working group co-chair at the U.N. Intergovernmental Panel on Climate Change.

Many Filipinos live with the constant fear of displacement. At the opposite end of Luzon from the Reyes family, the village of Sula, Vinzons, in the Bicol region sits nestled on a sandbank barely 400 ft. wide separating the Pacific Ocean from tidal mangroves. Without even an access road, life here revolves around fishing, shrimping, and farming oysters and crab. The only non-aquatic industries are a nearby watermelon farm and the occasional cluck and snuffle of chickens and pigs.

Around four times each year, village captain Rosemarie Abogado gives the order to evacuate, and Sula's 269 families clamber onto boats for the 20-minute journey to a nearby elementary school. There they must hunker down on mats for days while inclement weather submerges the village in swirling eddies of seawater, destroying crab pots, fishing nets, and homes. "Usually, it's men who are reluctant to leave the village because they want to take care of their livestock," says Abogado, sitting beneath the mango tree whose shade serves as an informal village hall.

After the typhoon passes, the villagers return to see what remains. Following last November's storms, Ricky Pioquinto found his two-room thatch house had been flattened. "It's only luck whether the pigs get flooded or not," says the dad of three. A fattened swine can fetch 12,000 pesos, or $215. "Sell a pig and you can buy anything," Pioquinto, 41, says. By comparison, fishing and crabbing are less profitable these days. A pound of crabs brings between 100 and 200 pesos ($1.75 to $3.50) depending on the size and quality. But catches have been getting sparser. "Sometimes we don't catch anything," says Pioquinto.

Around one-third of the world's fish stocks are overfished, including those in Southeast Asia, where China operates a colossal fishing operation. Climate change is compounding the problem. Oceans play a major role in climate dynamics: 83% of the global carbon cycle is circulated through the oceans, which have absorbed 93% of the excess heat from greenhouse-gas emissions since the 1970s.

But warmer waters alter the distribution of fish species, pushing those more suited to cooler temperatures farther and deeper, while reducing oxygen levels, impacting fish survival and productivity. Estimates suggest that at current rates of warming, fish and other marine species will be pushed around 20 km (12 miles) every decade. Meanwhile, ocean acidification, caused by increased carbon dioxide absorption from the atmosphere, is degrading coral reefs vital for marine life, while harming shellfish and other organisms with calcium carbonate shells.

"On top, these cyclones and storms have a really negative impact on the ecosystems as well as fishing infrastructure," says Michelle Tigchelaar, senior scientist and impact area lead for climate and environmental sustainability at the WorldFish NGO.

All of this means future generations of artisanal fishers will not see the catches that sustained their parents.

THE FREQUENCY OF TYPHOONS, locally called *bagyo,* means Filipinos are used to responding to them. The national weather bureau has an alphabetical list of names for storm systems which repeats every four years. A name is retired only when it is attached to a cyclone that has caused widespread destruction and loss of life.

One name that will never return is Yolanda—what Filipinos call Typhoon Haiyan—which killed more than 7,000 people, displaced 47.5 million, and caused more than $12 billion in damage in 2013. Yolanda was the deadliest storm to have ever struck the Philippines and more than anything served to redefine the nation's relationship with the ocean. Stretching 500 miles from tip to tip, its sustained winds of 195 m.p.h. tore into the central Visayas region, where storm surges of up to 23 ft. snapped coconut palms like matchsticks and razed entire towns.

Marinel Sumook Ubaldo was just 16 years old when the maelstrom ripped apart her home perched on the shoreline of Matarinao, Salcedo municipality, in Eastern Samar. "Only three concrete pillars remained," she recalls. Survivors were isolated for days without food or clean water and spent months with no electricity nor proper shelter. "We were literally eating whatever we could find floating on the water," says Ubaldo.

All the Ubaldo family possessions disappeared; dead bodies littered the devastation. Like nearly all the local fishermen,

From left: A partly built seawall and highway in the Bicol region; mangrove planting in Aurora province in March

her father lost his boat, destroying both his livelihood and sense of self-worth. Even if it had survived, the seas remained too rough for small vessels for some six months after the storm, and people recoiled at the thought of consuming fish that may have grown plump on the corpses of their departed neighbors. "He has been fishing since he was 8 years old," she says. "So it really affected him."

Yolanda's wake left hundreds of orphans, but even those like Ubaldo whose family had survived had their childish innocence ripped away. "Afterwards, I felt grown up," she recalls. "We lost our home. We literally went back to zero. I don't know how I would be able to go to college, so I became a breadwinner."

While working multiple jobs including at a fast-food restaurant to support her family, Ubaldo eventually won scholarships to study social work at university. But that helpless feeling stuck with her. A month after Yolanda, another typhoon struck, but this time nobody would take in her family, which was forced to shelter huddled next to a mountain. "I felt like I was just done being 'resilient,'" she says. "So we lobbied our local government unit to be more proactive."

In 2019, Ubaldo organized the Philippines' first youth climate strike. Today, she works in Washington, D.C., for the League of Conservation Voters environmental advocacy group, and has testified on climate issues at the U.N. and U.S. Senate. "During disasters, people are gracious that they help each other," she says. "But trauma really comes after a disaster: What should I do now?"

After Yolanda, the Philippine government added a new "level 5" to the existing four grades of storms, stressing the imperative for people to seek shelter when the worst arrives. But for many, the psychological bond with the ocean had been forever broken. "That relationship of the ocean both giving life and unfortunately, with these climate disasters, increasingly taking life away, is something that's very difficult to wrestle with," says Sean Devlin, a Filipino Canadian comedian and filmmaker who has been documenting displaced communities for over a decade.

YOLANDA EXPOSED OTHER VULNERABILITIES that have made the Philippines a test case of disaster response. The sheer force of these storms can remake the very shoreline where communities exist. Too often, poor villagers don't have deeds or other documentation to codify their ownership of land that has been used by their families for generations.

This lack of documentation exposes these communities to disaster capitalism. Around the world, natural disasters—including the Indian Ocean tsunami in 2004 and Hurricane Katrina the following year—have entrenched this concept, whereby crises create a blank sheet ready to be exploited by Big Business. It can happen even where ownership is clear. In post-Katrina New Orleans, destroyed public schools, housing, and health care facilities were replaced by private alternatives. In effectively commercializing the response, financial interests clashed with humanitarian goals. Something similar is now happening in the Philippines.

After Yolanda, the Philippine government enlisted the help of influential private firms to lead the recovery effort. Tellingly, those that secured development partners were mostly urbanized areas or strategic locations for transport and other investments, while remote municipalities found it harder to attract help. In the city of Tacloban, the epicenter of Yolanda, previously thriving communities were declared "no-build zones" as they were deemed too dangerous for human habitation. Instead, retail shops and strip malls sprang up.

If alternative housing was provided, it was typically set back many miles from the coast—while seemingly safer, it was impractical for those making a living at sea. "One of the fundamental things that I see anger expressed over is lack of consultation in terms of the response to storms and how people are relocated," says Devlin.

In 2023, Devlin released *Asog,* a black comedy set amid a real Visayan community still struggling from the social and economic fallout of Yolanda. The film features residents of Sicogon Island, some 6,000 of whom were subjected to a poststorm land grab perpetrated by Ayala Land Inc. to build a luxury resort. Following *Asog*'s success on the festival circuit, Ayala eventually started listening to residents' demands and has agreed to pay $5.1 million in reparations to 784 displaced families.

Most of the cash has been used to build 474 new storm-resistant homes within easy reach of the ocean. Still, the local community continues to fight with Ayala over the deeds. "Ayala has delivered just a portion of what they committed to," Amelia Dela Cruz, president of the Federation of Sicogon Island Farmers Fisherfolks Association (FESIFFA), said in a statement. "We won't give up until they fully comply with the agreement they signed and we have been given the titles to our land." (Ayala Land Inc. did not respond to repeated requests for comment from TIME.)

It's a remarkable victory of society's poorest over entrenched corporate interests.

The Philippines has also become a leader in securing legal protections for communities displaced by climate change. In September, lawmakers for the Bangsamoro Autonomous Region in Muslim Mindanao—a swath of the nation's second largest island boasting over 2,000 miles of coastline with rich fishing waters—passed a Rights of Internally Displaced Persons Act to safeguard people's access to basic necessities, health care, education, employment, cultural practices, freedom of movement, and popular representation.

The law is the first of its kind in the Philippines and one of only a handful worldwide. While refugees have specific charters governing their rights, including the 1951 U.N. Refugee Convention, people displaced within their own borders still technically enjoy all their national protections, as well as those enshrined by international human-rights and humanitarian law. However, in reality they often slip through the cracks.

"Displacement has been a painful reality in our homeland," Bangsamoro Government Chief Minister Ahod Balawag Ebrahim said upon the law's passing. "But today, we declare that the Bangsamoro will no longer be a region where displacement defines our people's lives."

THE NEED TO INSTILL RESILIENCE in communities is key—and remains an ongoing debate. Regions across the Philippines have begun building towering seawalls to protect against storm surges, though many locals doubt their efficacy. Tacloban residents have criticized the fact that their new seawall is shorter than the storm surge from Yolanda. And if the walls are breached, the fear is these concrete perimeters may impede receding floodwaters and increase the chance of drownings and destruction.

Half an hour's drive from the Reyes family in northern Aurora, Lucy Faner Ruiz also had her home destroyed in last winter's storms and now resides with her son. The 68-year-old retired teacher believes a half-built seawall 200 m from her home exacerbated the damage by retaining the floodwater and preventing it from draining away. "I won't rebuild until the seawall is completed," she says, standing amid the splintered wood and corrugated-iron scraps of her toppled home.

Others favor natural alternatives to seawalls. Standing in gum boots by the lapping water of northern Luzon's Casiguran Sound, Jose Bitong stabs the mud with a metal spear, pumps his arm to widen the hole, and then thrusts in a mangrove seedling. It's a routine Bitong and his small army of volunteers at the Casiguran Mangrove Rehabilitation and Protection Organization have repeated more than a million times since 1996, helping to regreen over 1,160 acres of coastline.

Aside from acting as natural barriers against storms and floods, mangroves reduce erosion while providing vital habitats for aquatic species that help replenish fish stocks. In addition, mangroves and coastal wetlands sequester carbon

Shrimp are dried on the seawall highway in the Bicol region in March

at rates 10 times that of mature tropical forests. "My goal is to plant as many mangroves as possible for climate-change mitigation," says Bitong, who operates two nurseries that cultivate 20,000 mangrove seedlings for his own organization and to donate to others.

It's not the only way local people are taking charge of their future. In the face of depleted fish stocks, younger coastal residents—aided by foreign and domestic NGOs—are leading the charge in trying to diversify into previously shunned species and develop new revenue streams, like cultivating seaweed for export.

On Sicogon Island, once the Ayala compensation was announced, FESIFFA could've just congratulated themselves and waited for their new homes. Instead, they insisted that local people join the building work. That way, islanders can learn new trades and take charge of future renovations and construction, enhancing capacity while keeping more money inside the community.

"It's so impressive and just a testament to allowing communities to really envision and lead solutions to these disasters," says Devlin. "They understand their situations better than anyone else."

It's for this reason that aid groups like Oxfam Pilipinas concentrate on targeted cash donations for vulnerable families to use on housing, livelihood tools, or education as they see fit. In the 2024–2025 financial year, Oxfam Pilipinas spent over $4.5 million toward humanitarian interventions, around half in cash for 189,807 individuals belonging to 37,961 households, including the Reyes, Ruiz, and Pioquinto families.

Few want to rely on a dilatory and distracted state. When TIME visited these communities, campaigning was in full swing for May's Philippines general election, and seemingly every pillar and beam had been festooned with party colors. In absurdist irony, even the Reyes family's shack had not escaped crass political adornment. "Two candidates visited and asked if they could stick up their posters," shrugs Noemi, glancing forlornly at the coiffured hair and beaming smiles stapled overhead. "But neither said they would help us."

Help is desperately needed—and fast. Our mid-April visit was only the third occasion that Marionito had managed to take his boat out this year, owing to treacherous, churning currents left over from the winter storms. Instead, he's been working as a day laborer cutting grass and planting crops on a nearby farm. Now he has only until the returning monsoon renders fishing too dangerous in August to earn sufficient cash to rebuild their home.

Noemi is doing her best to contribute. After preparing breakfast for her kids, she trudges to the wreckage of their former house to collect palm fronds to bundle into brooms, which she then sells for 12 pesos, or 22¢. "Working from morning until afternoon, I can make 10 brooms," she says. In every way, the Reyes family feels their lives drifting farther away from the ocean.

Asked whether he wants his kids to follow in his footsteps, Marionito doesn't hesitate. "Never," he says, gazing out at the deep blue. "The fisherman's life is full of uncertainty." And one fighting a relentlessly rising tide. □

Q&A With Diva Amon

The marine biologist working to protect our oceans from deep-sea mining

BY JEFFREY KLUGER

THE OCEANS NEED MORE CARE THAN they ever have—and few people are taking on that job with more commitment than Diva Amon. A marine biologist at the Benioff Ocean Science Laboratory at the University of California, Santa Barbara (Marc and Lynne Benioff are TIME's owners and co-chairs), Amon has a special love for the deeper reaches of the ocean—below 200 m, where sunlight does not penetrate, pressures are up to 110 times that of sea level, and temperatures drop to 39°F. Despite those punishing conditions, all manner of life forms thrive there. One of the greatest potential dangers to that fragile ecosystem is deep-ocean mining—industrializing the untouched and unseen ocean floor to extract nickel, cobalt, copper, manganese, gold, silver, and more. For now, the mining is not taking place—and Amon and her colleagues are advocating to keep it that way. Amon spoke to TIME in a wide-ranging conversation that has been edited for brevity and clarity.

Why do countries and companies want to begin deep-sea mining? They're looking for three kinds of resources. First, there are polymetallic nodules, which are sort of a metallic lump, anywhere from cherry size to potato size. They form in a way similar to a pearl, accreting around a tiny particle like a shark's tooth, a shell, or a piece of sediment. The rate at which they form is a few millimeters per million years. They are also looking for polymetallic sulfides, found at hydrothermal vents, which are one of the most remarkable and iconic deep-sea ecosystems. Finally, they're looking for cobalt-rich ferromanganese crusts, which are a layer that forms on seamounts [underwater mountains]. The crusts can be anywhere from millimeters to several feet thick.

How robust is life in these three resource areas? The minerals that are being targeted form a critical part of the seafloor, and the seafloor is what life attaches to in the deep ocean. Things like coral, anemones, and fungi are attached to the deep floor. In the case of nodules, they use them as an anchor or as a shelter. They are really the cornerstone of the ecosystem.

What other kinds of organisms live in these areas, and how big are these regions? We don't fully know. There are big gaps in our knowledge. There was a study that came out in 2023 that found that in the Clarion Clipperton Zone [which extends from Hawaii to Mexico], 88% to 92% of the multicellular species that live there have not been described by science. We're not talking about just one or two life forms. We're talking about thousands … The spatial scales of this are enormous. Just in the Clarion Clipperton Zone, industry projections are that they're planning to mine [more than 193,000 sq. mi.]. And because of the three-dimensional nature of the ocean, the concern is the impact will extend both vertically for thousands of meters and horizontally, potentially tripling the area of impact. There is a plume that is generated at the seafloor from the mining activity like a dust storm that will spread well beyond the mining tract. There's a secondary plume too. Anything that's mined will be pumped up a pipe to a ship which is waiting on the surface. The minerals will be separated from water and sediment and metal particles. Then that sediment, wastewater, and particulate and dissolved matter will be pumped back into the ocean from the ship. There are currently no regulations to dictate at what depth that waste is pumped back into the ocean.

KEVIN WINTER—GETTY IMAGES

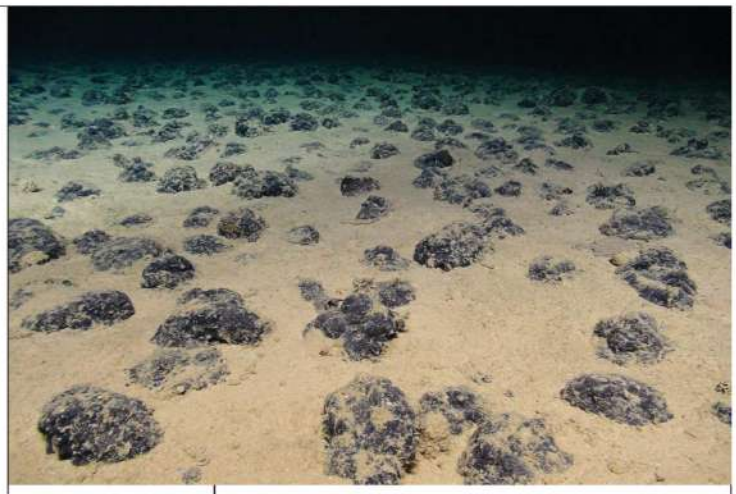
Could ecosystems recover from this? Life in the deep sea is extremely slow. There's very little food, and that means that life moves slowly, grows slowly, reproduces slowly. And so it really does not deal very well with impact. It takes a long time to recover. With nodules for instance, we will not see ecosystem recovery except on a scale of millions of years. Essentially, this would be irreversible damage. In the nearer term, there are increases in noise and light from mining that have never been seen before in the deep sea. All of that is going to result in biodiversity loss. You also have contaminants being released by the plumes that are going to work their way up the food chain. This could affect ecosystem services that we get from the deep sea, such as fisheries.

Is there an argument that deep-sea mining can help mitigate the harms of mining on land? There's no evidence that deep-sea mining would prevent terrestrial mining. It's likely that both will occur, causing double destruction, rather than one taking the place of the other. Something else that is often disregarded is that we know that the ocean plays a critical role in regulating the climate; it's where a majority of heat is absorbed, it's where an enormous amount of carbon is sequestered. The ocean is one of our greatest allies in the fight against the climate crisis. To argue for using deep-sea mining to solve the climate crisis is like smoking to lower your stress.

Valuing Our Oceans

It's time for a shift in economics

BY JUSTIN WORLAND



Deep-sea nodules are a source of critical metals. Mining for them could harm ecosystems

TROVES OF IN-DEMAND CRITICAL MINERALS SIT UNtouched deep at the bottom of the ocean: nickel, cobalt, and copper, to name a few. With the stroke of a pen in April, President Donald Trump signed an Executive Order to catalyze a "gold rush" in pursuit of those deposits. The value of those minerals could total in the trillions, and the Trump Administration wants American companies to access them in a bid to bolster the economy. Pushback to the move has largely focused on the potential for ecological damage and the order's flouting of international rules. There is also a good case to be made that the economic and financial math may not add up. For one, the outlook of different critical minerals is evolving. Cobalt demand projections, for example, have fallen below expectations as new battery chemistries emerge that rely less on that metallic element.

And then there are the costs associated with missed opportunities and unknown side effects. The depths of the ocean where deep-sea mining would take place have been undisturbed for millennia. In those waters, flora and fauna that could unlock medical breakthroughs sit untouched, and ocean dynamics mediate global climate conditions. "If we start mucking around with our seabed floor in pursuit of short-term wealth and growth," says Hawaii Governor Josh Green, a vocal opponent of seabed mining, "God knows what the long-term damage will be."

The bigger problem is that human society—policymakers, companies, and financial institutions—simply hasn't figured out how to value all that oceans do for us. To grapple with a full assessment of the economic value of oceans would mean a wholesale rethinking of how we interact with the world deep in the seven seas.

Using economics to value nature isn't new. For decades, scientists and economists have crunched the numbers on the contribution of what is known as ecosystem services. Those "services" include everything from coastal protection provided by coral reefs to the value of fisheries to local communities that rely on them for sustenance. Listing the services is one thing; tallying their worth is another, challenging task. Researchers say that the total economic value of oceans needs to include the direct use of oceans like fishing and tourism as well as indirect functions like storing carbon and protecting biodiversity that keeps the planet in balance.

The math isn't simple. How can you put a price on, say, the role that oceans play regulating the global climate? Nonetheless, researchers consistently come up with figures that reach into the tens of trillions of dollars in annual value. Whatever the precise number, a bigger problem is that leaders in government and business aren't using it. "A wide array of methods and techniques for ecosystem valuation exist, but are only occasionally implemented in policy decisions," reads a 2019 paper from the European Marine Board, an ocean-policy think tank. No country has fully accounted for the economic value of oceans in its policymaking. A survey of leaders in developing countries found that even though many of those nations depend on marine resources, protecting marine life ranked last among the U.N. Sustainable Development Goals.

THE U.S. WANTS TO MINE THE DEEP SEA. BUT ECONOMISTS WARN THAT LEADERS AREN'T TAKING THE FULL VALUE OF THE OCEANS INTO ACCOUNT—FROM CLIMATE PROTECTION TO MEDICINE—WHEN MAKING KEY DECISIONS

TO ACCOUNT FOR THE VALUE of oceans in decisionmaking, researchers are pushing for countries to adopt what has become known as natural capital accounting. That would entail incorporating data on the ecological and economic value of oceans into country-level accounting systems. Such recommendations are not the work of radical activists or fringe academics. The World Bank, for example, advises that low-income countries use natural capital accounting to assess and protect their natural resources.

In the absence of such a formal move, leaders concerned about economic stability would be wise to shift their thinking. In some cases, that may mean moving away from viewing the ocean as a source of easily exploited resources. In others, it may mean moving from viewing ocean conservation as an altruistic act to an act of economic self-preservation. ◻

THE NATIONAL OCEANOGRAPHY CENTRE AND THE TRUSTEES OF THE NATURAL HISTORY MUSEUM, WITH ACKNOWLEDGMENT TO THE NERC SMARTEX PROJECT

Q&A With Sylvia Earle

The ocean conservationist on hope, and why she keeps diving

BY SIMMONE SHAH

MARINE BIOLOGIST SYLVIA EARLE could easily rest on her laurels. In a career that began in the 1950s, she has become a pioneer in ocean exploration and conservation. She holds the record for the deepest walk under the sea and was the first female chief scientist at the U.S. National Oceanic and Atmospheric Administration. But on the cusp of her 90th birthday this August, she has no plans to slow down—and believes that the problems currently facing our oceans have never been more urgent. Her most recent venture, Mission Blue, aims to create a worldwide network of marine protected areas known as Hope Spots. This now includes the Chesapeake Bay. TIME spoke to Earle in May after a dive she made in the U.S.'s largest estuary.

You have been involved in ocean-conservation work for decades. What changes have you noticed since you first started this work? We have learned more about the nature of the ocean, of the planet as a whole, and even about ourselves. When I was a child, no one had been to the moon, no one had been to the deepest part of the sea. The internet did not exist. Think about the things we did not know, even about the microbial world, and how influential that is on everything and everyone. That was just missing in our understanding of how the world functions. [We've learned more about] the magnitude of our climate and what our role has been in bringing about change. In many cases, we've lost more than during all preceding history.

What do you feel is the most pressing issue facing our oceans now? Ignorance, complacency, lack of awareness that the ocean is essential to everyone, everywhere, all the time. Every breath we take, every drop of water we drink, we are connected to the ocean … It just seems perverse that we take so much for granted and are so casual about consuming nature [when] you realize how long it has taken for the natural systems to come to a state where we actually can not just survive here, but thrive here … We know what to do. We just need, in this really critical crossroads in time, to use the knowledge we have and to come together. Everybody is, without exception, vulnerable to the state of the planet, the habitability of Earth. If you don't have water, if you don't have food. All of the basics anchor back to [the idea that] we've got to take care of what keeps Earth, our home, safe in a universe that is really inhospitable. For those who want to go to Mars and set up housekeeping, I say, good luck … But it's not an alternative to Earth. We are of the Earth. Actually, we are of the ocean, because it's the ocean that makes our existence possible.

As someone who has led more than 100 expeditions and logged more than 7,000 hours underwater, what's one thing you wished more people knew about our oceans? I wish people could understand [that the ocean] is not just a massive amount of salt water, but rather it's a living system. What we put into the ocean changes the chemistry of not just the ocean, but of the planetary functions as a whole. T he consequences to planetary chemistry, to planetary security, are right now facing us with the prospect of the sharp changes that we won't be able to control if they get to that tipping point. The good news through all of this, I think, is that the world has not tipped yet into a state from which we cannot recover. We've got all the warning signs, the rapid increase in temperature, the rapid increase of carbon dioxide in the atmosphere, the rapid loss of forests on the land, and the consequences of clear-cutting forests, disrupting the carbon cycle, clear-cutting the ocean of fish, of squid, of krill from Antarctica, all of this. We know what we need to do.

MONICA SCHIPPER—GETTY IMAGES FOR TORY BURCH FOUNDATION

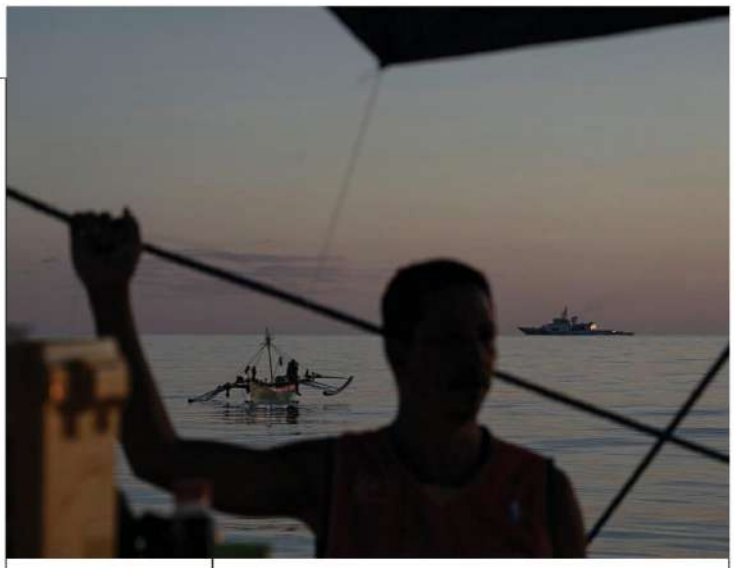
A big part of Mission Blue's work is identifying Hope Spots in the ocean. When much of our ecosystems are under threat, why is it important to you to highlight these areas? The real purpose underlying the Hope Spot concept is to ignite public awareness and support for protecting nature. The Hope Spot is a means to a broader end, to get people to be aware of why the ocean in particular matters. Land and sea together, the whole world is one big, mostly blue Hope Spot, but [we want to] energize individual champions, communities, institutions, to come together with a common purpose of protecting a place that they know and love. This is meant to highlight and enforce and support everybody else who's trying to do something to turn from declined to recovery, one Hope Spot, one community, one champion at a time.

You are almost 90 years old—what keeps you diving? Why not? I think it's important to keep doing the things you love as long as you can. How can I resist when most of the areas on Earth where life exists have yet to be explored? I want to keep doing it as long as I can breathe. Don't you want to do the same thing?

A New Turbulence

Politics is roiling the waters that should connect us

BY STURLA HENRIKSEN



JOHANNA MARIA FRITZ—OSTKREUZ/REDUX

Filipino fishermen in Scarborough Shoal, in the South China Sea, in March 2024

THE URGENCY OF HALTING OCEAN DEGRADATION AND unlocking a sustainable blue economy has never been greater. Yet, as the third U.N. Ocean Conference convened from June 9–13 in Nice, France, this mission came against a backdrop of rising geopolitical tension: great-power rivalries, trade disputes, and a fraying rules-based world order are steadily eroding the trust and institutions essential for collaboration. The U.S. Administration has declared that it "rejects and denounces" the U.N. Sustainable Development Goals—among them "Goal 14: Life Below Water," which forms the bedrock of ocean-conservation efforts. But the stakes stretch far beyond marine ecosystems. What unfolds in the ocean will shape the future of life on land.

The ocean is humanity's greatest global commons. It is a single, interconnected body of water, as the saying often goes, "carrying riches and resources, pollution and problems, from coast to coast." The blue economy is projected to grow faster than global GDP in the coming decades. And it must be central to creating a better world. To deliver clean, reliable, and affordable energy to industries, nations, and communities, offshore wind farms, floating solar parks, and kinetic energy harvested from waves, currents, and tides must be part of the solution. A low- and zero-emission international merchant fleet is crucial to ensuring the continued flow of seaborne trade. To expand total food production and strengthen the resilience of global supply chains, scaling sustainable aquaculture and ensuring responsible international management of wild fish stocks will be essential. Moreover, a clean, healthy, and productive ocean is at the heart of tackling climate change. Nature-based marine solutions and maritime industries are estimated to offer up to a third of the emissions reductions needed to meet the Paris Agreement goals.

Unlocking this immense potential requires renewed global cooperation. There have been signs of progress: the Kunming-Montreal Global Biodiversity Framework—adopted in 2022 with the goal of reversing nature loss by 2030—and ongoing negotiations under the International Maritime Organization to decarbonize shipping. Yet, today's geopolitical currents are pulling in the opposite direction. Major powers are turning inward and against one another, while protectionism, populism, and divisive nationalism are rising. In this turbulent landscape, the ocean—ever a driver and theater of global affairs—is at the center.

Around the world, powerful nations—and many smaller ones—are expanding naval capabilities and reinforcing coastal defenses. As terrestrial resources dwindle, competition for fish stocks, seabed minerals, and other marine resources is intensifying. This tension is further fueled by the world's shifting centers of demographic, economic, and diplomatic gravity—from the North-West to the South-East. Unlike other continents, which are landscapes surrounded by ocean, Southeast Asia is a "seascape"—an ocean enclosed by land. This unique geography heightens both the need for cooperation and the risk of conflict over marine spaces. Just as other parts of the rules-based world order are under strain, so too is the U.N. Convention on the Law of the Sea. The U.S. has unilaterally expanded its continental shelf, approved deep-sea mining in national and international waters without waiting for global rules, and exited negotiations to curb shipping emissions. Meanwhile, China continues to reject the 2016 Permanent Court of Arbitration ruling on disputed South China Sea territories, citing "historical rights" to assert its claims.

THE OCEAN COULD BE OUR GREATEST ALLY IN FIGHTING CLIMATE CHANGE, FEEDING THE WORLD, AND GROWING THE GLOBAL ECONOMY. INSTEAD, IT'S BECOMING A BATTLEGROUND IN A NEW ERA OF GEOPOLITICS

The international community must rally in a spirit of solidarity and shared purpose. Yet the prevailing geopolitical winds are turning our greatest global commons into an increasingly contested and perilous domain. That is a course we simply cannot afford. The opportunity cost—for prosperity and planetary stability—is immense. Now is the time for bold, responsible action. Without a clean, healthy, and productive ocean, our collective future is in jeopardy.

Henriksen is the U.N. Global Compact Special Adviser for Ocean, co-chair of the G20 Ocean group, and author of The Ocean

Coral Reefs In Peril

How we can protect the ocean right now

BY MARC BENIOFF AND ED RUSSO

A nursery at the Coral Restoration Foundation in the Florida Keys

THE OCEAN MAY BE NATURE'S SINGLE GREATEST GIFT TO humanity. It provides about half of the oxygen we breathe, feeds billions of people, supports countless jobs in every corner of the globe, and absorbs more carbon dioxide than anything else on earth. The ocean connects us all.

But right now, the ocean is sounding an unmistakable alarm. Fishing boats around the world are returning emptier. Coastal zones are growing warmer and murkier, and they are becoming more polluted as millions of gallons of water laced with pharmaceuticals, forever chemicals, and sewage leak into the sea. Coral reefs are turning white.

We come to these challenges with different experiences and perspectives. One of us lives in the Florida Keys and chairs the White House Environmental Advisory Task Force. The other lives in Hawaii and the Bay Area and leads a global technology company. At the same time, we share something fundamental: a deep commitment to the health of the oceans—and a deep belief that differences in some areas should not prevent us from working together on pressing issues where we agree. We need to roll up our sleeves and get to work.

We have an opportunity for global action. Officials from more than 100 nations, scientists, and innovators recently gathered in Nice, France, for the United Nations Ocean Conference, held only once every few years. The meeting tested our ability to work together across sectors, borders, and worldviews, and to act on behalf of future generations.

That's why we're calling for a focused global effort to restore coral-reef health. Coral-reef ecosystems—from the famous reefs of the Florida Keys National Marine Sanctuary to the Great Barrier—are the ocean's rainforests. Vital and vulnerable, they shelter nearly a quarter of marine life, buffer coastal communities from storms, and sustain billions of dollars in fisheries and tourism. Yet they are disappearing at unprecedented speed.

Rising temperatures are part of the problem. But so are decades of negligence, coastal pollution, overfishing, and damage from dredging and poorly planned ports and coastal infrastructure.

We believe that addressing coral-reef health is a smart place to focus—not because it is the only crisis, but because it offers a clear, actionable, achievable goal that can unite governments and ocean advocates across sectors. We also know that nature-based solutions are powerful, proven, and cost-effective tools for addressing the impacts of climate change and biodiversity loss. Restoring coral reefs—like planting and conserving trees—empowers nature to do what it does best: regenerate, protect, and sustain life.

WE'VE SEEN A MODEL for this kind of collaboration before.

As part of the Trillion Trees (1t.org) movement, the first Trump Administration joined an unprecedented global effort to reforest the planet. Trees are the planet's natural air purifiers—the single most effective "device" we have to pull carbon out of the atmosphere. There remains far more work to do. Yet with more than 9.7 billion trees pledged and more than 54 million hectares of land under sustainable management so far, the Trillion Trees initiative demonstrates the progress that's possible when we align behind a common goal.

We believe that we can take lessons from the Trillion Trees movement—

JAY CLUE

underwater. It's helpful to think of the ocean as a patient in the emergency room. Long-term recovery depends on curing the disease, and, yes, different people may have different ideas on the best long-term approach. But right now, we're losing a lot of blood, and we need to stop it—fast. We need to deal with immediate problems that threaten the health of coral reefs.

Solutions exist, and many communities, ecopreneurs, and conservationists are already deploying them. Here's what a focused, global effort to restore coral reefs could look like:

1. Curb septic and sewage runoff—especially in critical reef zones like Hawaii, South Florida, Puerto Rico, American Samoa, and Guam—by upgrading and modernizing the infrastructure that treats waste water and scaling new technologies such as denitrification that converts toxic nitrogen to a harmless gas. We also need to set up water-testing programs that help us pinpoint and address pollution hot spots near the most important reefs. Nothing we do to restore coral reefs will matter if water quality doesn't improve to the point where they can survive.

WE BELIEVE THAT CORAL REEFS ARE A SMART PLACE TO FOCUS—NOT BECAUSE THEY'RE THE ONLY CRISIS, BUT BECAUSE THEY OFFER A CLEAR, ACTIONABLE, ACHIEVABLE GOAL THAT CAN UNITE GOVERNMENTS AND OCEAN ADVOCATES

2. Scale science-based coral restoration, including advanced farming of specially grown corals and responsible management of protected marine zones.

3. Stop plastic—which harms reefs by smothering coral, increasing the risk of disease, and entangling marine life—before it reaches the ocean. We can tackle this through bans on single-use waste, incentives for alternative materials, and as a last resort, the implementation of new technologies that intercept ocean-bound plastic in waterways. The world needs more efforts like Hawaii's Papahanaumokuakea Marine Debris Project, which is removing plastics from the ocean, and the Benioff Ocean Science Lab, which helps innovate solutions to capture and remove plastic from rivers before it ends up in the ocean.

4. Empower fishing businesses to promote sustainable practices by eliminating overfishing, ending harmful fisheries subsidies globally, and reducing the sometimes destructive impacts of fisheries on marine habitats.

5. Restore coastlines with mangroves, wetlands, seagrass meadows and coastal forests. Many of these ecosystems can serve as nursery habitat for commercially and ecologically important coral-reef fish. They also often act together to dissipate waves that pound coastlines and serve as natural, free, and self-repairing seawalls. Healthy shorelines mean healthier oceans, and healthier oceans in turn mean safer and more prosperous coastal communities.

WE RECOGNIZE THAT some will say calling attention to discrete, nature-based approaches like coral-reef restoration is a moral hazard, distracting from the bigger long-term solutions to our environmental challenges. At the same time, there is widespread agreement that the crisis facing the oceans demands a diverse range of approaches. We need to harness every available solution. Sometimes, we need to start with the work—and the opportunity for collaboration—right in front of us.

That's what made the conference in Nice so important. It came as ocean action has never been more essential. It required leadership from every sector, including business, government, and science. The question is whether we can turn shared understanding into shared action. What's needed is the will to save the ocean, one commitment at a time.

***Benioff** is Salesforce chair and CEO, TIME owner, and a global environmental and philanthropic leader*

***Russo** is chair of the White House Environmental Advisory Task Force, president of the Florida Keys Environmental Coalition, and a board member of Reef Relief; he is a longtime environmental adviser to President Trump*

THE ORB WILL SEE YOU NOW

An audacious startup wants to prove you're human. What else does it want?

BY BILLY PERRIGO/SAN FRANCISCO AND SEOUL

The Orb maps the unique patterns of a user's iris in order to "verify" their humanity

PHOTOGRAPH BY DAVIDE MONTELEONE FOR TIME

ONCE AGAIN, SAM ALTMAN WANTS TO SHOW YOU the future. The CEO of OpenAI is standing on a sparse stage in San Francisco, preparing to reveal his next move to an attentive crowd. "We needed some way for identifying, authenticating humans in the age of AGI," Altman explains, referring to artificial general intelligence. "We wanted a way to make sure that humans stayed special and central."

The solution Altman came up with is looming behind him. It's a white sphere about the size of a beach ball, with a camera at its center. The company that makes it, known as Tools for Humanity, calls this mysterious device the Orb. Stare into the heart of the plastic-and-silicon globe and it will map the unique furrows and ciliary zones of your iris. Seconds later, you'll receive inviolable proof of your humanity: a 12,800-digit binary number, known as an iris code, sent to an app on your phone. At the same time, a packet of cryptocurrency called Worldcoin, worth approximately $42, will be transferred to your digital wallet—your reward for becoming a "verified human."

Altman co-founded Tools for Humanity in 2019 as part of a suite of companies he believed would reshape the world. Once the tech he was developing at OpenAI passed a certain level of intelligence, he reasoned, it would mark the end of one era on the internet and the beginning of another, in which AI became so advanced, so human-like, that you would no longer be able to tell whether what you read, saw, or heard online came from a real person. When that happened, Altman imagined, we would need a new kind of online infrastructure: a human-verification layer for the internet, to distinguish real people from the proliferating number of bots and AI "agents."

And so Tools for Humanity set out to build a global "proof-of-humanity" network. It aims to verify 50 million people by the end of 2025; ultimately its goal is to sign up every single human being on the planet. The free crypto serves as both an incentive for users to sign up, and also an entry point into what the company hopes will become the world's largest financial network, through which it believes "double-digit percentages of the global economy" will eventually flow. Even for Altman, these missions are audacious. "If this really works, it's like a fundamental piece of infrastructure for the world," Altman tells TIME in a video interview from the passenger seat of a car a few days before his April 30 keynote address.

'YOU CAN'T PRESERVE THE INTERNET IN AMBER.'

—DIVYA SIDDARTH, COLLECTIVE INTELLIGENCE PROJECT

The project's goal is to solve a problem partly of Altman's own making. In the near future, he and other tech leaders say, advanced AIs will be imbued with agency: the ability to not just respond to human prompting, but also to take actions independently in the world. This will enable the creation of AI co-workers that can drop into your company and begin solving problems; AI tutors that can adapt their teaching style to students' preferences; even AI doctors that can diagnose routine cases and handle scheduling or logistics. The arrival of these virtual agents, their venture-capitalist backers predict, will turbocharge our productivity and unleash an age of material abundance.

But AI agents will also have cascading consequences for the human experience online. "As AI systems become harder to distinguish from people, websites may face difficult trade-offs," says a recent paper by researchers from 25 different universities, nonprofits, and tech companies, including OpenAI. "There is a significant risk that digital institutions will be unprepared for a time when AI-powered agents, including those leveraged by malicious actors, overwhelm other activity online." On social media platforms like X and Facebook, bot-driven accounts are amassing billions of views on AI-generated content. In April, the foundation that runs Wikipedia disclosed that AI bots scraping the site were making the encyclopedia too costly to sustainably run. Later the same month, researchers from the University of Zurich found that AI-generated comments on the subreddit r/ChangeMyView were up to six times as successful as human-written ones at persuading unknowing users to change their minds.

The arrival of agents won't only threaten our ability to distinguish between authentic and AI content online. It will also challenge the internet's core business model, online advertising, which relies on the assumption that ads are being viewed by humans. "The internet will change very drastically sometime in the next 12 to 24 months," says Tools for Humanity CEO Alex Blania. "So we have to succeed, or I'm not sure what else would happen."

For four years, Blania's team has been testing the Orb's hardware abroad. Now the U.S. rollout has arrived. Over the next 12 months, 7,500 Orbs will be arriving in dozens of American cities, in locations like gas stations, bodegas, and flagship stores in Los Angeles, Austin, and Miami. The project's founders and fans hope the Orb's U.S. debut will kick-start a new phase of growth. The San Francisco keynote was titled "At Last."

It's not clear the public appetite matches the exultant branding. Tools for Humanity has "verified"

JASON HENRY—THE NEW YORK TIMES/REDUX

Blania, left, and Altman debut the Orb at World's U.S. launch in San Francisco on April 30

just 12 million humans since mid-2023, a pace Blania concedes is well behind schedule. Few online platforms currently support the so-called World ID that the Orb bestows upon its visitors, leaving little to entice users to give up their biometrics beyond the lure of free crypto. Even Altman isn't sure whether the whole thing can work. "I can see [how] this becomes a fairly mainstream thing in a few years," he says. "Or I can see that it's still only used by a small subset of people who think about the world in a certain way."

Yet as the internet becomes overrun with AI, the creators of this strange new piece of hardware are betting that everybody in the world will soon want—or need—to visit an Orb. The biometric code it creates, they predict, will become a new type of digital passport, without which you might be denied passage to the internet of the future, from dating apps to government services. In a best-case scenario, World ID could be a privacy-preserving way to fortify the internet against an AI-driven deluge of fake or deceptive content. It could also enable the distribution of universal basic income (UBI)—a policy that Altman has previously touted—as AI automation transforms the global economy. To examine what this new technology might mean, I reported from three continents, interviewed 10 Tools for Humanity executives and investors, reviewed hundreds of pages of company documents, and "verified" my own humanity.

The internet will inevitably need some kind of proof-of-humanity system in the near future, says Divya Siddarth, founder of the nonprofit Collective Intelligence Project. The real question, she argues, is whether such a system will be centralized—"a big security nightmare that enables a lot of surveillance"—or privacy preserving, as the Orb claims to be. Questions remain about Tools for Humanity's corporate structure, its yoking to an unstable cryptocurrency, and what power it would concentrate in the hands of its owners if successful. Yet it's also one of the only attempts to solve what many see as an increasingly urgent problem. "There are some issues with it," Siddarth says of World ID. "But you can't preserve the internet in amber. Something in this direction is necessary."

IN MARCH, I MET Blania at Tools for Humanity's San Francisco headquarters, where a large screen displays the number of weekly "Orb verifications" by country. A few days earlier, the CEO had attended a $1 million-per-head dinner at Mar-a-Lago with President Donald Trump, whom he credits with clearing the way for the company's U.S. launch by relaxing crypto regulations. "Given Sam is a very high-profile target," Blania says, "we just

decided that we would let other companies fight that fight, and enter the U.S. once the air is clear."

As a kid growing up in Germany, Blania was a little different from his peers. "Other kids were, like, drinking a lot, or doing a lot of parties, and I was just building a lot of things that could potentially blow up," he recalls. At the California Institute of Technology, where he was pursuing research for a master's degree, he spent many evenings reading the blogs of startup gurus like Paul Graham and Altman. Then, in 2019, Blania received an email from Max Novendstern, an entrepreneur who had been kicking around a concept with Altman to build a global cryptocurrency network. They were looking for technical minds to help with the project.

Over cappuccinos, Altman told Blania he was certain about three things. First, smarter-than-human AI was not only possible, but inevitable—and it would soon mean you could no longer assume that anything you read, saw, or heard on the internet was human-created. Second, cryptocurrency and other decentralized technologies would be a massive force for change in the world. And third, scale was essential to any crypto network's value.

The goal of Worldcoin, as the project was initially called, was to combine those three insights. Altman took a lesson from PayPal, the company co-founded by his mentor Peter Thiel. Of its initial funding, PayPal spent less than $10 million actually building its app—but pumped an additional $70 million or so into a referral program, whereby new users and the person who invited them would each receive $10 in credit. The referral program helped make PayPal a leading payment platform. Altman thought a version of that strategy would propel Worldcoin to similar heights. He wanted to create a new cryptocurrency and give it to users as a reward for signing up. The more people who joined the system, the higher the token's value would theoretically rise.

Since 2019, the project has raised $244 million from investors like Coinbase and the venture-capital firm Andreessen Horowitz. That money paid for the $50 million cost of designing the Orb, plus maintaining the software it runs on. The total market value of all Worldcoins in existence, however, is far higher—around $12 billion. That number is a bit misleading: most of those coins are not in circulation, and Worldcoin's price has fluctuated wildly. Still, it allows the company to reward users for signing up at no cost to itself. The main lure for investors is the crypto upside. Some 75% of all Worldcoins are set aside for humans to claim when they sign up, or as referral bonuses. The remaining 25% are split between Tools for Humanity's backers and staff, including Blania and Altman. "I'm really excited to make a lot of money," Blania says.

VERIFYING YOUR HUMANITY

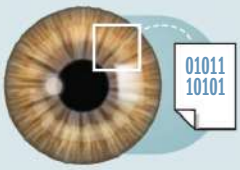
When you visit an Orb, the machine extracts biometric data from your iris and uses it to activate a "World ID" stored on your phone. The company believes the device will become a vital, privacy-preserving way of proving you're not an AI.

Deploying the Orb

Tools for Humanity (TfH) is currently rolling out Orbs worldwide. Today there are **1,609 around the world,** and the company plans to launch **7,500 across the U.S.** alone within the next 12 months

Proof of personhood

The first thing the Orb does is check if you're human, using a **neural network** that takes input from various sensors, including an **infrared camera** and a **thermometer**



Extracting an iris code

The Orb then takes a **high-resolution photo** of your iris. An on-device algorithm turns this picture into a 12,800-digit binary number called an **iris code.** The same iris will always yield the same code

> **'I'M REALLY EXCITED TO MAKE A LOT OF MONEY.'**
>
> —ALEX BLANIA, CEO, TOOLS FOR HUMANITY

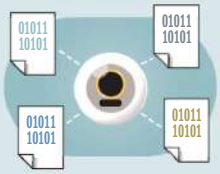
From the beginning, Altman was thinking about the consequences of the AI revolution he intended to unleash. (On May 21, he announced plans to team up with famed former Apple designer Jony Ive on a new AI personal device.) A future in which advanced AI could perform most tasks more effectively than humans would bring a wave of unemployment and economic dislocation, he reasoned. Some kind of wealth redistribution might be necessary. In 2016, he partially funded a study of basic income, which gave $1,000 per month to low-income individuals in Illinois and Texas.

But there was no single financial system that would allow money to be sent to everybody in the world. Nor was there a way to stop an individual human from claiming their share twice—or to identify a sophisticated AI pretending to be human and pocketing some cash of its own. In 2023, Tools for Humanity raised the possibility of using the network to redistribute the profits of AI labs that were able to automate human labor. "As AI advances," it said, "fairly distributing access and some of the created value through UBI will play an increasingly vital role in counteracting the concentration of economic power."

Blania was taken by the pitch, and agreed to join the project as a co-founder. "Most people told us we were very stupid or crazy or insane, including Silicon Valley investors," Blania says. At least until ChatGPT came out in 2022, transforming OpenAI into one of the world's most famous tech companies and kick-starting a market bull run. "Things

Checking for uniqueness

The Orb examines whether any other Orbs have **seen your iris code before,** using a technique that **allows encrypted data to be compared** without revealing the underlying data itself



Preventing duplicates

The Orb "anonymizes" your iris code by turning it into several **distinct encrypted codes,** and sends each to a **different secure server.** TfH says the system prevents users from repeatedly signing up

Worldcoin issued

Once you have "verified" your humanity, a **packet of Worldcoin lands in your World App,** which can be claimed in 12 installments. The value fluctuates, but today it is **worth about $42**

suddenly started to make more and more sense to the external world," Blania says of the vision to develop a global proof-of-humanity network. "You have to imagine a world in which you will have very smart and competent systems somehow flying through the internet with different goals and ideas of what they want to do, and us having no idea anymore what we're dealing with."

AFTER OUR INTERVIEW, Blania's head of communications ushers me over to a circular wooden structure where eight Orbs face one another. The scene feels like a cross between an Apple Store and a ceremonial altar. "Do you want to get verified?" she asks. Putting aside my reservations for the purposes of research, I download the World App and follow its prompts. I flash a QR code at the Orb, then gaze into it. A minute or so later, my phone buzzes with confirmation: I've been issued my own personal World ID and some Worldcoin.

While I stared into the Orb, several complex procedures had taken place at once. A neural network took inputs from multiple sensors—an infrared camera, a thermometer—to confirm I was a living human. Simultaneously, a telephoto lens zoomed in on my iris, capturing the physical traits within that distinguish me from every other human on earth. It then converted that image into an iris code: a numerical abstraction of my unique biometric data. Then the Orb checked to see if my iris code matched any it had seen before, using a technique allowing encrypted data to be compared without revealing the underlying information. Before the Orb deleted my data, it turned my iris code into several derivative codes—none of which on its own can be linked back to the original—encrypted them, deleted the only copies of the decryption keys, and sent each one to a different secure server, so that future users' iris codes can be checked for uniqueness against mine. If I were to use my World ID to access a website, that site would learn nothing about me except that I'm human. The Orb is open-source, so outside experts can examine its code and verify the company's privacy claims. "I did a colonoscopy on this company and these technologies before I agreed to join," says Trevor Traina, a Trump donor and former U.S. ambassador to Austria who now serves as Tools for Humanity's chief business officer. "It is the most privacy-preserving technology on the planet."

Only weeks later, when researching what would happen if I wanted to delete my data, do I discover that Tools for Humanity's privacy claims rest on what feels like a sleight of hand. The company argues that in modifying your iris code, it has "effectively anonymized" your biometric data. If you ask Tools for Humanity to delete your iris codes, it will delete the one stored on your phone, but not the derivatives. Those, it argues, are no longer your personal data at all. But if I were to return to an Orb after deleting my data, it would still recognize those codes as uniquely mine. Once you look into the Orb, a piece of your identity remains in the system forever.

If users could truly delete that data, the premise of one ID per human would collapse, Tools for Humanity's chief privacy officer Damien Kieran tells me when I call seeking an explanation. People could delete and sign up for new World IDs after being suspended from a platform. Or claim their Worldcoin tokens, sell them, delete their data, and cash in again.

This argument fell flat with E.U. regulators in Germany, who recently declared that the Orb posed "fundamental data protection issues" and ordered the company to allow European users to fully delete even their anonymized data. (Tools for Humanity has appealed; the regulator is now reassessing the decision.) "Just like any other technology service, users cannot delete data that is not personal data," Kieran said in a statement. "If a person could delete anonymized data that can't be linked to them by World or any third party, it would allow bad actors to circumvent the security and safety that World ID is working to bring to every human."

ON A BALMY AFTERNOON this spring, I climb a flight of stairs up to a room above a restaurant in an outer suburb of Seoul. Five elderly South Koreans tap on their phones as they wait to be "verified" by the two Orbs in the center of the room. "We don't really know how to distinguish between

GLOBE: STOCKDEVIL—GETTY IMAGES; IRIS: ONYXPRJ—ISTOCK/GETTY IMAGES

AI and humans anymore," an attendant in a company T-shirt explains in Korean, gesturing toward the spheres. "We need a way to verify that we're human and not AI. So how do we do that? Well, humans have irises, but AI doesn't."

The attendant ushers an elderly woman over to an Orb. It bleeps. "Open your eyes," a disembodied voice says in English. The woman stares into the camera. Seconds later, she checks her phone and sees that a packet of Worldcoin worth 75,000 Korean won (about $54) has landed in her digital wallet. Congratulations, the app tells her. You are now a verified human.

A couple dozen Orbs have been available in South Korea since 2023, verifying roughly 55,000 people. Now Tools for Humanity is redoubling its efforts there. At an event in a traditional wooden *hanok* house in central Seoul, an executive announces that 250 Orbs will soon be dispersed around the country—with the aim of verifying 1 million Koreans in the next 12 months. South Korea has high levels of smartphone usage, crypto and AI adoption, and internet access, while average wages are modest enough for the free Worldcoin on offer to still be an enticing draw—all of which makes it fertile testing ground for the company's ambitious global expansion. Yet things seem off to a slow start. In a retail space I visited in central Seoul, Tools for Humanity had constructed a wooden structure with eight Orbs facing one another. Locals and tourists wander past looking bemused; few volunteer themselves up. Most who do tell me they are crypto enthusiasts who came intentionally, driven more by the spirit of early adoption than the free coins.

The next day, I visit a coffee shop in central Seoul where a chrome Orb sits unassumingly in one corner. Wu Ruijun, a 20-year-old student from China, strikes up a conversation with the barista, who doubles as the Orb's operator. Wu was invited here by a friend who said both could claim free cryptocurrency if he signed up. The barista speeds him through the process. Wu accepts the privacy disclosure without reading it, and widens his eyes for the Orb. Soon he's verified. "I wasn't told anything about the privacy policy," he says on his way out. "I just came for the money."

AS ALTMAN'S CAR winds through San Francisco, I ask about the vision he laid out in 2019: that AI would make it harder for us to trust each other online. To my surprise, he rejects the framing. "I'm much more [about] like: What is the good we can create, rather than the bad we can stop?" he says. "It's not like, 'Oh, we've got to avoid the bot overrun' or whatever. It's just that we can do a lot of special things for humans."

ALTMAN HAS A HABIT OF MAKING IDEALISTIC PROMISES THAT SHIFT OVER TIME

It's an answer that may reflect how his role has changed over the years. Altman is now the chief public cheerleader of a $300 billion company that's touting the transformative utility of AI agents. The rise of agents, he and others say, will be a boon for our quality of life—like having an assistant on hand who can answer your most pressing questions, carry out mundane tasks, and help you develop new skills. It's an optimistic vision that may well pan out. But it doesn't quite fit with the prophecies of AI-enabled infopocalypse that Tools for Humanity was founded upon.

Altman waves away a question about the influence he and other investors stand to gain if their vision is realized. Most holders, he assumes, will have already started selling their tokens—too early, he adds. "What I think *would* be bad is if an early crew had a lot of control over the protocol," he says, "and that's where I think the commitment to decentralization is so cool." Altman is referring to the World Protocol, the underlying technology upon which the Orb, Worldcoin, and World ID all rely. Tools for Humanity is developing it, but has committed to giving control to its users over time—a process they say will prevent power from being concentrated in the hands of a few executives or investors. Tools for Humanity would remain a for-profit company, and could levy fees on platforms that use World ID, but other companies would be able to compete for customers by building alternative apps—or even alternative Orbs.

The plan draws on ideas that animated the crypto ecosystem in the late 2010s and early 2020s, when evangelists for emerging blockchain technologies argued that the centralization of power—especially in large so-called Web 2.0 tech companies—was responsible for many of the problems plaguing the modern internet. Just as decentralized cryptocurrencies could reform a financial system controlled by economic elites, so too would it be possible to create decentralized organizations, run by their members instead of CEOs. How such a system might work in practice remains unclear. "Building a community-based governance system," Tools for Humanity says in a 2023 white paper, "represents perhaps the most formidable challenge of the entire project."

Altman has a pattern of making idealistic promises that shift over time. He founded OpenAI as a nonprofit in 2015, with a mission to develop AGI safely and for the benefit of all humanity. To raise money, OpenAI restructured itself as a for-profit company in 2019, but with overall control still in the hands of its nonprofit board. Last year, Altman proposed yet another restructure—one which would dilute the board's control and allow more profits to flow to shareholders. Why, I ask, should

Visitors view Orbs in Seoul; Tools for Humanity aims to "verify" 1 million Koreans over the next year

TAEMIN HA FOR TIME

the public trust Tools for Humanity's commitment to freely surrender influence and power? "I think you will just see the continued decentralization via the protocol," he says. "The value here is going to live in the network, and the network will be owned and governed by a lot of people."

Altman talks less about universal basic income these days. He recently mused about an alternative, which he called "universal basic compute." Instead of AI companies redistributing their profits, he seemed to suggest, they could instead give everyone in the world fair access to super-powerful AI. Blania tells me he recently "made the decision to stop talking" about UBI at Tools for Humanity. "UBI is one potential answer," he says. "Just giving [people] access to the latest [AI] models and having them learn faster and better is another." Says Altman: "I still don't know what the right answer is. I believe we should do a better job of distribution of resources than we currently do."

When I probe the question of why people should trust him, Altman gets irritated. "I understand that you hate AI, and that's fine," he says. "If you want to frame it as the downside of AI is that there's going to be a proliferation of very convincing AI systems that are pretending to be human, and we need ways to know what is really human-authorized vs. not, then yeah, I think you can call that a downside of AI. It's not how I would naturally frame it."

The phrase *human-authorized* hints at a tension between World ID and OpenAI's plans for AI agents. An internet where a World ID is required to access most services might impede the usefulness of the agents that OpenAI and others are developing. So Tools for Humanity is building a system that would allow users to delegate their World ID to an agent, allowing the bot to take actions online on their behalf, according to Tiago Sada, the company's chief product officer. "We've built everything in a way that can be very easily delegatable to an agent," Sada says. It's a measure that would allow humans to be held accountable for the actions of their AIs. But it suggests that Tools for Humanity's mission may be shifting beyond simply proving humanity, and toward becoming the infrastructure that enables AI agents to proliferate with human authorization. World ID doesn't tell you whether a piece of content is AI-generated or human-generated; all it tells you is whether the account that posted it is a human or a bot. Even in a world where everybody had a World ID, our online spaces might still be filled with AI-generated text, images, and videos.

As I say goodbye to Altman, I'm left feeling conflicted about his project. If the internet is going to be transformed by AI agents, then some kind of proof-of-humanity system will almost certainly be necessary. Yet if the Orb becomes a piece of internet infrastructure, it could give Altman—a beneficiary of the proliferation of AI content—significant influence over a leading defense mechanism against it. People might have no choice but to participate in the network in order to access social media or online services.

I thought of an encounter I witnessed in Seoul. In the room above the restaurant, Cho Jeongyeon, 75, watched her friend get verified by an Orb. Cho had been invited to do the same, but demurred. The reward wasn't enough for her to surrender a part of her identity. "Your iris is uniquely yours, and we don't really know how it might be used," she says. "Seeing the machine made me think: Are we becoming machines instead of humans now? Everything is changing, and we don't know how it'll all turn out." —*With reporting by* STEPHEN KIM/SEOUL ◻

This story was supported by Tarbell grants

TIME100 PHILANTHROPY

On May 22, TIME recognized influential leaders from the inaugural TIME100 Philanthropy list who are driving transformative change and shaping the future of giving.

Experience more: **time.com/t100impact-philanthropy**

KEN GRIFFIN FOUNDER & CHIEF EXECUTIVE OFFICER, CITADEL AND FOUNDER, GRIFFIN CATALYST, **ELIZABETH ALEXANDER** PRESIDENT, THE MELLON FOUNDATION, **DAVID BECKHAM** FORMER PROFESSIONAL FOOTBALLER, ENTREPRENEUR, AND PHILANTHROPIST, **AYESHA CURRY** ENTREPRENEUR AND CO-FOUNDER, EAT. LEARN. PLAY. FOUNDATION, **LIN-MANUEL MIRANDA** SONGWRITER, ACTOR, DIRECTOR, PRODUCER, AND PHILANTHROPIST

THANK YOU TO OUR PARTNERS

SIGNATURE PARTNER

THE ART OF LIVING

SUPPORTING PARTNERS

Allstate Foundation

Cessna BY TEXTRON AVIATION

IBM

Time Off

F1 MAKES A PITT STOP

BY SEAN GREGORY

Big stars and fast cars combine in a summer bid to fill theaters and grow a global fan base

INSIDE

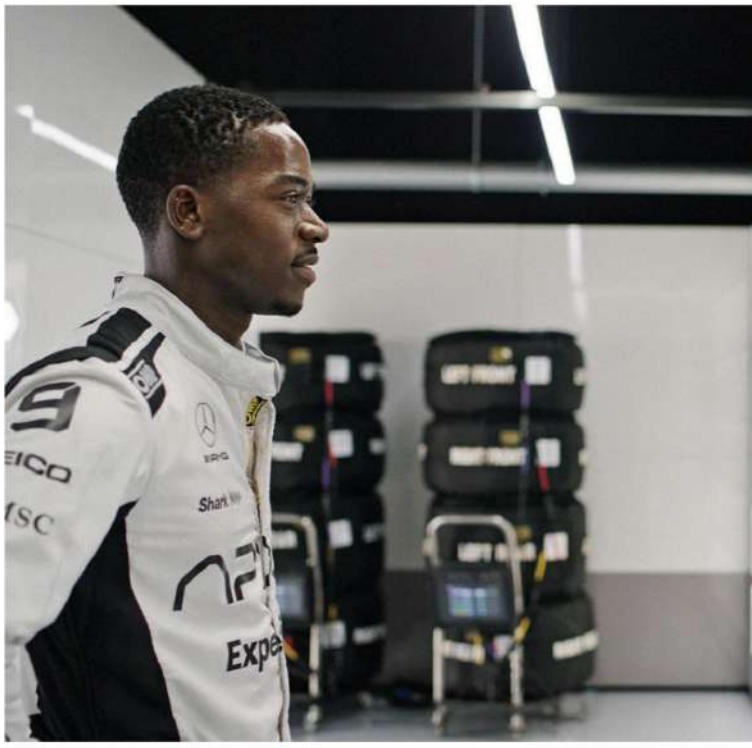
FORMULA ONE TEAMS TREAT THEIR TRADE secrets like matters of national security. In a motorsport where milliseconds separate champions from also-rans, hiding technical know-how from opponents is as key as a fresh pair of tires. So when Joseph Kosinski, director of *F1 the Movie*—the summer-blockbuster hopeful starring Brad Pitt and hitting theaters and IMAX on June 27—tried to gain access to the inner workings of Formula One, a rush of déjà vu hit him. After all, Kosinski made *Top Gun: Maverick,* the 2022 naval-aviator smash that grossed $1.5 billion, with the support of the U.S. Department of Defense. "It was the same level of security," he says, "that I experienced when I went to some secret bases."

Kosinski spent a year bugging Toto Wolff, team principal of the Mercedes–AMG Petronas F1 team, for permission to film at the Mercedes race simulator. Most Mercedes employees themselves can't access this space at headquarters, 70 miles northwest of London. But Wolff finally relented. So in the movie viewers will see Pitt and Damson Idris, who respectively play Sonny Hayes and Joshua Pearce, drivers for the fictional APXGP team, practicing on Mercedes' high-priced toys. "We were keen on contributing to making this a success," says Wolff, who along with F1 president and CEO Stefano Domenicali is credited as an executive producer. "And that means you cannot be half pregnant and say, 'Yeah, we're playing along, but no, we don't want to let you into our factory.'"

The *F1* filmmakers still made postproduction alterations to protect Mercedes' intellectual property. All sides had to compromise, and deliver, in unique ways to bring F1 to life. It was all part of a delicate balancing act between a big-budget production team, led by Jerry Bruckheimer, used to calling its own shots, and a $3.4 billion sport with a dedicated global fan base, whose participants could not afford distractions just to appear in some Hollywood fantasy. Sure, *F1* was allowed to bring its cast and crew to actual races across the globe. But they'd have to film during downtime at the track, or just blend into the background. "The live sport," says Domenicali, "I cannot touch."

The stakes were similarly high in a movie industry where original stories struggle to compete with familiar IP; box-office success would be meaningful for future original ideas. And the involvement of Apple, whose studio arm backed the film—which will live on Apple TV+ after *F1*'s Warner Bros. Pictures–distributed theatrical run—added another element of complexity. "It was very, very complicated trying to have Apple and F1, two massive organizations that are very controlling of their own brands, to play along," says Kosinski. "But the fact that Stefano had the vision for the film, and Apple took the gamble on this movie, here we are, four years later. We're about to take it out to the world."

***F1*'S ORIGIN STORY** begins a decade ago, when Kosinski was developing a script called "Go Like Hell," which later became the 2019 Oscar-winning auto-racing hit *Ford v Ferrari*. Kosinski had Tom Cruise and Pitt attached to the roles that would eventually be played by Matt Damon and Christian Bale. Cruise and Pitt even did a script read at Cruise's house.



Teammates at odds: Idris and Pitt, as Pearce and Hayes

But Kosinski dropped out, mainly over budget conflicts, and turned his attention to *Top Gun* with Cruise and Bruckheimer. During the pandemic, Kosinski caught the racing bug again while bingeing *Formula One: Drive to Survive,* Netflix's series chronicling Formula One's behind-the-scenes intrigue. Kosinski emailed seven-time F1 champion Lewis Hamilton, a cinephile who planned to join the *Top Gun* cast before realizing he couldn't swing that and chase championships. Kosinski told him he needed his help making the most authentic auto-racing movie ever.

Kosinski got Hamilton—a producer on the film who makes a cameo—Bruckheimer, and Pitt on board. The goal was to gain access to F1 races and factories so they wouldn't have to CGI the whole thing. In early 2022, Kosinski, Bruckheimer, and Pitt met with Domenicali in London. Domenicali accompanied Kosinski and Pitt at a private *Top Gun* screening, to give the F1 boss a taste of the whizbang effect such a film could bring to his sport. He saw the potential. A movie fronted by Pitt could corral a mass audience and leave them wanting to know more about F1. "This has always been the strategy," says Domenicali. "To connect

with new people, new markets."

Still, some F1 race teams remained skeptical. They were nervous about being portrayed in an unflattering light. "Somebody's got to be the villain," says Bruckheimer. And while there is a minor character, unassociated with any actual F1 race team, who emerges as a foil to Hayes, Bruckheimer made clear that the story centers on the tension between two drivers, the aging Hayes and the up-and-comer Pearce, on the same fictional team. That's a familiar dynamic: both drivers are seeking individual success, and want to beat the pants off the other guy. At least nominally, however, they're supposed to play nice on the track. At Mercedes, for example, Hamilton and Nico Rosberg, the 2016 F1 champion, famously clashed. "It became real hostile," recalls Wolff.

Mercedes helped convert cars from Formula Two, the minor-league circuit, into machines that could pass for F1 cars. The filmmakers had a half-dozen at their disposal: if they wanted to film a scene in which Pitt's APXGP car passes a Ferrari, they'd stage that action with their own cars at an F1 track between practice and qualifying sessions before a race. Later, they would "skin" the Ferrari design over the production car to make it look like a Ferrari on the screen. (Kosinski used this skinning technique with the *Top Gun* jets.) They could also capture actual race footage and skin the APXGP car over the Red Bulls and Ferraris. The production team installed 15 camera mounts on its cars, filming with up to four at once, to capture Pitt and Idris in their cockpits, and action on the track. "Brad Pitt, he's driving the car," says Eddy Cue, Apple's senior vice president of services. "It's not blue screen or CGI." Both actors learned to drive as fast as 180 m.p.h., not too far off from real F1 drivers' top speeds of around 220 m.p.h.

"These guys were fast," says Javier Bardem, who plays Ruben Cervantes, the owner of the struggling APXGP team who recruits Pitt's Hayes, at a Florida coin laundry, in a Hail Mary attempt to lift his squad. "The first time I saw them racing, I said to Joe, 'What's insurance got to say about that?' Joe goes, 'What insurance?'"

F1 filmed at 14 races during the 2023 and 2024 F1 seasons, across three continents. The production reportedly cost more than $200 million. During some races, APXGP had their own garage, paddock, and perch along the pitwall, where the fictional team principal, technical director, and race engineers sit. "We designed it ourselves," says Bruckheimer. "One of the Mercedes designers came in there and said, 'Sh-t, I'm going to lose my job.'"

Much like the actual Formula One drivers, the actors needed to be on their games—even the ones who never sat in the driver's seat. Right before the start of the 2023 British Grand Prix, *F1* shot a scene in which Cervantes introduces Hayes to a team board member, played by Tobias Menzies. It was like performing a live stage play in front of more than 150,000 spectators: Formula One wasn't about to hold up the race for repeated takes.

'This has always been the strategy. To connect with new people, new markets.'

STEFANO DOMENICALI, FORMULA ONE CEO

"It was terrifying," says Bardem. "I kept telling myself, 'Don't f-ck it up, Javier. Don't f-ck it up.'" He didn't.

THE PRODUCTION CRESCENDOED in Abu Dhabi last December, when, after the actual podium celebration recognizing Lando Norris' victory, Charles Leclerc of Ferrari, Mercedes' George Russell, and one of the APXGP drivers mounted the podium to celebrate the fake F1 finish. Wolff filmed his cameo in Abu Dhabi: he tells Idris' Pearce to call him if he wants to jump ship to Mercedes. Wolff wasn't impressed with his own work. "I don't think I'm going to follow Arnold Schwarzenegger as the next big Austrian thing," he says with his pronounced accent.

While the film puts a premium on authenticity to please the carheads, it also strives to attract general moviegoers, with its soaring Hans Zimmer score, high-speed crashes, the Hayes-Pearce conflict, and a romance between Hayes and the team's technical director, Kate McKenna (Oscar nominee Kerry Condon). The sensitivities surrounding a workplace relationship between F1's (fictional) first female team tech director and one of her drivers—which would seem quite scandalous if it went public in real life—did cross Kosinski's mind. But when he floated it to F1 insiders, no one objected. Romances within the tight-knit world are relatively common. "I'm not worried," says Domenicali. "And by the way, it gives you the right Hollywood touch."

The producers insist feedback has been positive. According to Domenicali and Cue, when test audiences unfamiliar with F1 are asked, after watching, if anyone would now be interested in attending a race, hands go up. Stakeholders also hope it gives diverse audiences the itch to work in the industry. "It's going to inspire female engineers and mechanics," says Hamilton. "It's going to inspire people from all over, from all different backgrounds."

Sounds like lofty expectations for popcorn fare. But the F1 portrayed on the big screen—globe-trotting from Italy to Japan to Vegas to the Middle East, with its fireworks on and off the track—undoubtedly has its upsides.

Aerodynamics lesson, anyone? ◻

OPENING PAGE, THESE PAGES: WARNER BROS. (2)

CHINA WATCH
PRESENTED BY CHINA DAILY 中国日报

Young leaders drive environmental change

A new generation of Chinese is stepping off the beaten path to protect deserts, birds and biodiversity — turning environmental ideals into everyday action

Above: Sheng Tiancheng observes and photographs migratory birds in Yancheng, Jiangsu province. **Right:** Wildlife images captured by Sheng featuring various species.
PHOTOS PROVIDED TO CHINA DAILY

BY GUI QIAN

Standing on a sand dune in Minqin county, Gansu province, Zhong Lin, 27, gazed into the distance at rows of newly planted saxaul saplings.

"Turning a desert into an oasis might not be very realistic, but we can certainly protect the existing oases," he said.

In 2021 Zhong returned to his hometown from Lanzhou, the provincial capital, to start a tree-planting business. Since then he has become a key figure in local efforts to combat desertification.

His inspiration came from Minqin's long history of battling encroaching sands.

"My hometown has been fighting desertification since the Ming (1368-1644) and Qing (1644-1911) dynasties, making it one of the earliest places in China to do so," he said. "Today it's up to us young people to take up the baton."

Zhong's path reflects a broader trend among young people who are breaking away from traditional career expectations. Instead of taking jobs in big cities, some are heading to deserts, wetlands and rural areas, turning environmental protection into both a mission and a livelihood.

Of course these choices come with challenges. "There was a lot of financial pressure," Zhong said. "My parents didn't understand, and my friends thought I was being silly."

The work itself is tough, too. After a sandstorm in March only a few dozen of the 500 newly planted saxaul trees survived.

However, Zhong is no quitter. In 2022 he started a social media account showing short videos of his daily planting work. The account drew a lot of attention.

His biggest breakthrough came last year when he appeared on the second season of the reality show *Become a Farmer,* planting trees alongside celebrities. Since then, planting trees in Minqin has become popular among young people, attracting many volunteers. Zhong even built steel-framed houses for the volunteers, which have since evolved into a "desert home base".

Li Yanyan, 20, of Xiangtan, Hunan province, is also a doer.

She is studying wildlife and nature reserve management at Beijing Forestry University and is head of the school's environmental club, and in September discovered that the glass buildings on campus posed a fatal threat to birds.

This discovery led her to connect with broader efforts to tackle the issue, including the China National Anti-Bird Collision Network, with tens of thousands of participants.

Li quickly gathered data from the previous three years, analyzed it and submitted a proposal to the university president. She then began advocating for anti-collision window decals across campus.

By last December nearly 3,200 square feet of glass corridors had been modified. In April she and her team continued their work, expanding the project to more campus areas.

Her efforts have also inspired similar actions at other universities, including Peking University and Sun Yat-sen University in Guangdong province.

"Protecting biodiversity isn't just the responsibility of a few professionals," she said. "It's something everyone should integrate into their daily lives."

Joining Li in this mission is Sheng Tiancheng, who is studying finance at the same university. Although his academic background is not directly related, Sheng is an experienced wildlife conservationist.

From above: Zhong Lin (left) is a key figure in combating desertification in Minqin, Gansu province. Volunteers hike into the desert in Minqin, on April 22.

Above: Sheng Tiancheng organizes bird-watching activities for primary and secondary school students. **Below:** Li Yanyan, another wildlife conservationist, observes birds with her team.

He began bird-watching when he was 12 and has since become a wildlife photographer, capturing images of sparrows in city parks, migratory birds at reservoirs and animals resting in forests. His work documenting the skywalker hoolock gibbon (*Hoolock tianxing*) even earned him a national photography award.

"Through my camera more people can appreciate the beauty of wildlife," he said. "That sense of wonder can spark love and compassion, and ultimately raise awareness about protecting the natural world."

Sheng is also a nature educator. Each year he organizes dozens of bird-watching activities, mainly for primary and secondary school students.

In Xishuangbanna, Yunnan province, he created a bird-watching camp in which he invites experts of the Chinese Academy of Sciences to lead lessons and incorporate biodiversity knowledge into interactive games.

Sheng said that even in a "concrete jungle," humans and wildlife breathe the same air, so protecting nature is not a choice but a survival skill we all need to learn.

Nature protection and wildlife conservation may be relatively niche fields, but young people such as Zhong, Li and Sheng are dedicated and driven by the belief that life is not a one-way street, and that their efforts are yielding results.

More than 800,000 trees have been planted this year, covering about 330 acres of land targeted for desertification control, Zhong said.

Last year more than 7,000 volunteers took part in the initiative, and so far this year there have already been 34,000 volunteer visits. Half of these volunteers are university students and young people aged 20 to 35, coming from various professions and regions.

Nan Xi, 27, an art teacher from Gansu province, joined the tree-planting base and brightened the surroundings by painting murals on the steel-framed buildings. She also took on organizational duties and often serves as the first person to welcome new volunteers. She even brought in her parents to help with cooking, which has greatly improved meals for everyone at the base.

Pu Yiyu contributed to this story.

Documentary revisits ping-pong days of 1971

BY MINLU ZHANG

In 1971 the American table tennis player Glenn Cowan boarded the wrong bus during the world championships in Nagoya, Japan. He missed the U.S. team's bus and got on the next one, only to find himself on the Chinese team's bus.

On the bus a Chinese player, Zhuang Zedong, saw the unfamiliar American, stepped forward and introduced himself.

"They didn't speak each other's languages, but somehow they were able to communicate because they tried," the film producer Bill Einreinhofer said. "And their picture was taken and traveled around the world. They started a dialogue between America and China that continues today."

Einreinhofer, a three-time Emmy Award-winning producer, documented the period in his new film *Your Serve or Mine*. The encounter led to what became known as ping-pong diplomacy.

> "THE UNDERLYING MESSAGE OF THE FILM IS THAT, IN FACT, EVEN IF WE ARE COMING FROM VERY DIFFERENT CULTURES AND VERY DIFFERENT PLACES, THERE ARE SOME SIMILARITIES."
>
> **BILL EINREINHOFER,** FILM PRODUCER

The group of nine U.S. table tennis players embarked on a milestone journey to China, helping break the ice between Beijing and Washington and laying the groundwork for the eventual establishment of diplomatic relations.

Ping-pong diplomacy "was the starting point for a back-channel way that two countries with profound differences could find some way to communicate, some way to talk outside of the glare of the media," Einreinhofer said.

The documentary streamed on the Public Broadcasting Service in the U.S. in May, and the New York Film Academy hosted a premiere for the film on April 30.

"The underlying message of the film is that, in fact, even if we are coming from very different cultures and very different places, there are some similarities," Einreinhofer said.

Ping-pong diplomacy unfolded around the time that Einreinhofer was in high school, and he could remember little about it. So Einreinhofer started researching and realized "how profound that moment in history was."

"I discovered how powerful it can be when college and university students from China and the U.S. visit each other's countries. They can play a really important role in helping both sides better understand one another and in creating a line of communication."

The documentary also tells the stories of present-day people-to-people exchanges between China and the U.S.

Roxanne Roman, one of the characters in the documentary, who was a Schwarzman Scholar at Tsinghua University in Beijing in 2018 and is a graduate of NYU Shanghai, said: "It is really great to see that there's still a lot of effort and desire in working on people-to-people relations. I think it really resonated with some of the messaging, still trying to find ways to talk, to relate and to be interested in different cultures and in each other."

The documentary "highlights the power of people-to-people connections, the kind that continue today through exchanges of students, educators and professionals across all fields," said Joy Zhu, executive vice-president for the China region at the New York Film Academy.

Carl (Goode) solves cold cases from a grimy subbasement

TELEVISION

A Goode detective with a rotten attitude

BY JUDY BERMAN

DEPT. Q, A NETFLIX CRIME DRAMA FROM *THE QUEEN'S Gambit* writer-director Scott Frank, presents itself as a show about difficult people. Its antihero, Edinburgh police detective Carl Morck, has just come back to work after being shot in the line of duty—while berating a young cop who was killed before Carl could finish his rant. Body-cam footage of the shooting, along with an already irascible reputation, ensures his return is anything but triumphant. The premiere also introduces Merritt Lingard, a prickly prosecutor whose hostile cross-examination of a man she's sure murdered his wife infuriates her colleagues.

There's great potential in the entwining of these "good guys" with bad personalities whose obsessive pursuit of justice has left them isolated and embittered. If only the show's many plot twists didn't restrain its parallel accounts by limiting viewers' perspective on Merritt (Chloe Pirrie). Frank, adapting a series of novels by Danish author Jussi Adler-Olsen, is ultimately more invested in Carl. That in some ways disappointing choice does set up a detective series with the potential to run for many seasons without getting old, thanks to characters and performances richer than we normally see in this overcrowded genre.

As portrayed by the charming Matthew Goode *(The Crown, Downton Abbey),* Carl, an Englishman who complains incessantly about his adoptive home of Scotland, is as fascinating in his self-protective arrogance as he is frustrating. "The phrase *superiority complex* seems to be the overall theme of your personnel file," notes Dr. Irving (a wry Kelly Macdonald), the therapist he's been ordered to see. He replies that he's less impressed with himself than he is unimpressed by other people. This attitude is his way of suppressing his guilt over not just his inferior's death, but also the grave injury suffered by his still hospitalized partner, DCI James Hardy (Jamie Sives), in an incident for which everyone seems to blame Carl.

A sense of moral confusion pervades the series

A more formulaic detective show would send him on a rogue mission to apprehend the assailant who shot all three cops. Yet Frank, who wrote or co-wrote all nine episodes and directed six, makes the intriguing decision to keep that case mostly in the background. The season focuses, instead, on Carl's new assignment to establish Department Q—a cold-case division funded by leaders bent on generating positive press by creating fodder for crime podcasts. This is hardly an honor. Carl's boss, Moira (Kate Dickie), a woman with a perma-grimace who despises him, resents being forced to reopen old cases when she urgently needs resources for active ones. So she gives Carl a box of yellowing files, banishes him to a murky subbasement, and uses his budget to buy everyone else new computers.

Though Moira is none too eager to give him the help he needs, Hardy has nothing better to do while convalescing than scrutinize evidence, and Dept. Q eventually cobbles together a small staff. A nerve-shattering accident has confined Detective Constable Rose Dickson (Leah Byrne) to her desk. Unpleasant as it can be, working with Carl gives the young officer a chance to get back in the field, where she flexes the warmth and people

skills he lacks. Recruited from IT, Syrian refugee Akram Salim (Alexej Manvelov), who claims to have relevant experience from his home country, has been bugging Moira to put him on the force. Like Carl, Akram crosses lines, though his transgressions are fueled by expediency rather than temper. "Back home, were you working for the good guys or the bad guys?" Carl asks him. "When you know which is which," he replies, "please do tell me."

THIS SENSE of moral confusion—around how we should feel about detectives who do bad things in service of good outcomes, whether the blame for their behavior lies with institutions that rarely work well without manipulation—pervades the series. No easy answers are provided, as the missing-person case Dept. Q takes on complexifies. This is, in large part, a refreshing break from the didactic tone of so many crime shows, though Frank does leave some compelling ideas insufficiently examined. He seems more concerned with introducing relationships and storylines that could fuel subsequent seasons by developing characters in tandem with the central mystery. (His coyness about major aspects of Carl's personal life does feel a bit gratuitous.) Though they're very different, Carl, Rose, Akram, Hardy, and even Moira have all been scarred by jobs that force them to absorb endless trauma. "I'm two people," Carl reflects, in a rare moment of vulnerability: one who is immersed in humanity's ugliest impulses and another who's struggling to project normality.

It's an effective choice to lean into the protagonist's cognitive dissonance instead of trying too hard to maintain a uniform mood. By inhabiting the interiority of detectives who live in our mundane world but have to keep their heads in a scarier one, *Dept. Q* expands beyond typical crime fare in much the same way *The Queen's Gambit* transcended chess. The first season lacks the latter show's depth. But what it accomplishes should be enough to make it very popular. In that case, it could become one of TV's best procedurals, with as many opportunities to go deeper as there are files on Carl's desk. □

DEPT. Q: JAMIE SIMPSON—NETFLIX; STICK: APPLE TV+

TELEVISION

Redemption on the back nine

The third episode of the new Apple TV+ golf comedy *Stick* is called "Daddy Issues," but "Daddy Issues" might as well be the title of the show. Created by *Ford v Ferrari* screenwriter Jason Keller, it stars Owen Wilson as a former top golfer, Pryce Cahill, who was cast out of the sport after an extremely public flameout two decades ago. He's been mired in the past ever since, from his job outfitting hobbyists at a sporting-goods store to his refusal to finalize his divorce after years of separation from his long-suffering wife (Judy Greer), move out of their old house, and accept that he is no longer a husband or a father or a pro athlete.

When he spots a surly teen at the local driving range, Santiago Wheeler (Peter Dager), who has the makings of a generational superstar, Pryce sees in this potential protégé a shot at redemption. But Santi, whose now estranged dad used to push him too hard on the golf course, doesn't exactly relish the prospect of having a new father figure to satisfy.

It sounds hackneyed and heartstring-yanking—another comedy that uses sports as a cover for an earnest exploration of men's feelings and relationships from the platform that brought us *Ted Lasso*. There are indeed elements of *Stick* that come off as pandering to fans of *Lasso*'s fictional team AFC Richmond; as if a dad-rock soundtrack ("Baba O'Riley," "The Boys Are Back in Town") weren't enough, it even rips off *Lasso*'s world-weary folk theme song. While it's a relief that Greer's Amber-Linn isn't made out to be a harpy, the show can be cringingly conspicuous in its efforts to model empathy for women. A self-described "genderqueer, anti-capitalist, postcolonial feminist" character named Zero (Lilli Kay) initially reads as an assemblage of lazy Gen Z clichés that exist mostly in the overactive imaginations of boomers.

Yet within the limitations of its formula, *Stick* works. A trite setup gives way to a looser road-trip vibe after Pryce persuades Santi and his savvy mom Elena (Mariana Treviño) to pile into an RV with him and his cranky ex-caddie, Mitts (an effectively typecast Marc Maron), for a summer of amateur tournaments. Everyone here is low-key lonely, with familial baggage that keeps them from connecting with others. Thankfully, Keller's scripts aren't as twee or didactic about this stuff as *Lasso* and *Shrinking* creator Bill Lawrence's tend to be. Nor are his characters larger-than-life cartoons like Ted; most, including Zero, quickly become multifaceted people, courtesy of a cast blessed with unshowy charisma. A game changer it isn't, but *Stick* still comes out a few strokes ahead. —*J.B.*

STICK *drops a new episode every Wednesday, through July 23, on Apple TV+*

Wilson and Greer watch Dager tee off

MOVIES

Approaching the end, with deliberate steps

BY STEPHANIE ZACHAREK

Ejiofor and Karen Gillan: together at the end of the world

STORIES ABOUT THE MEANING OF LIFE TEND to work at cross-purposes with the job of actually living it, particularly when they pedal hard to activate the tear ducts. Mike Flanagan's science-fiction life affirmer *The Life of Chuck*—adapted from a Stephen King novella—is an ambitious little film that has already earned some laurels: it was an audience favorite at last year's Toronto International Film Festival, winning the People's Choice Award. Thanks to a few key moments, and the strength of its actors, it's easy to see why audiences would warm to the film. But if you're immune to its charms, you won't be alone. From its cute-fake soundstage-town setting to the authoritative yet chummy voice-over narration (courtesy of Nick Offerman), *The Life of Chuck* works doggedly to give you the warm fuzzies—and a little bit of that fuzz goes a long way.

The story is ingeniously—or pretentiously, depending on your mood—constructed to unspool backward, beginning with the third act and ending with the first. In the opening section, Chiwetel Ejiofor plays schoolteacher Marty, whose class is interrupted just as his students are digging into Walt Whitman's "Song of Myself," particularly its key phrase "I contain multitudes." A student gasps: she's just seen the news on her phone that part of California has fallen into the ocean. Then the internet shuts down altogether, possibly for good—the end times are near, maybe, and the world is getting ready. Marty sees a weird billboard, featuring a smiling man in a business suit and the words CHARLES KRANTZ, 39 GREAT YEARS!, and THANKS CHUCK! (The missing comma in that last phrase is presumably just one of the mysteries of life.) Marty doesn't know who Chuck is, nor does anyone he asks. But this billboard, followed by other mysterious Chuck references, may hold the key to the end of the world.

In the second act, we find out exactly who Chuck is: a pleasant accountant, played by Tom Hiddleston. And in the third—which is to say the first and final act—we learn Chuck's backstory, how he was orphaned at a young age and sent to live with his grandparents, Mark Hamill's gruff but kind bookkeeper Albie and his sensible but joyful homemaker wife Sarah, played by Mia Sara. Sarah loves to dance, and she teaches young Chuck—at this point played by an appealing child actor named Benjamin Pajak—her best moves. He's a natural, though something is holding him back. And he too will study that Walt Whitman poem: it will shape not only his destiny, but also that of the world.

The Life of Chuck works doggedly to give you the warm fuzzies

BECAUSE *THE LIFE OF CHUCK* is based on a Stephen King story, all that heavy-duty supernatural pondering just comes with the territory. The problem is that Flanagan—known for eerie but subtle horror films like *Hush* and *Oculus* and Netflix series like *Midnight Mass* and *The Haunting of Hill House*—puts too many overly earnest quotation marks around what should be the most moving scenes. The score becomes grand and syrupy whenever there's a big emotional revelation; characters deliver solemn soliloquies on the orderly beauty of math. *The Life of Chuck* explores the joys and sorrows of a life well lived in the most precious way—though Hiddleston and Ejiofor succeed somewhat in counterbalancing the mawkishness. Ejiofor explains Carl Sagan's Cosmic Calendar with a Shakespearean authority that makes every word matter. And Hiddleston, in the second section, has an extended dance number that momentarily sends the movie soaring. As a street drummer (Taylor Gordon, also known as the Pocket Queen) beats out a fascinatin' rhythm, Hiddleston's Chuck taps, whirls, and moonwalks through a spontaneous routine that, for as long as it lasts, almost manages to connect you with the meaning of life. He's the spirit of Gene Kelly reincarnated in a regulation accountant's gray suit; when he's in motion, *The Life of Chuck* really is transcendent. □

NEON

Mike Birbiglia The comedian on his fourth Netflix special *The Good Life*, the rise of right-wing comics, and being funny vs. being famous

Would you like to be more famous? No, not at all. I said to my wife recently, "It's a week away from when I'm famous for a month and then not for two years."

Would you say that you have made choices to not be famous? Maybe, but I don't really know. People ask me to watch their solo shows. They're like, "Give notes." I saw one a few months ago, and I was like, "What do you want it to be?" The person was like, "I want it to be bigger." And I'm like, "Well, that's not anything that I'm ever trying to do."

By bigger, he means . . .? More popular. My inflection point artistically in my career was 16 years ago, when I had a CBS pilot not get picked up. After that I thought, I only want to be rejected on my own terms. And then once I did my first one-person show, *Sleepwalk With Me,* it made me be comfortable having a niche.

What else helped you get to that place? Part of it is having my daughter. The thing that's unspoken in the show is that opening up to everyone is a thing I want to teach my daughter. I think of my comedy as: Am I being true to myself? And then am I being true to my daughter?

Is that more important to you than being funny? No, no. Being funny is the most important. That is ultimately what I have to offer. Sometimes John Mulaney will say to me, "I feel like you should just do a full hour of straight jokes, to remind people that you're as good as any just joke-joke comic." And I'm like, "Yeah, but then I wouldn't be me."

It seems from the show like your childhood was stable but a bit repressed. Is that right? What I'm realizing as I get older is that my childhood was much lonelier than I realized, because I was this Mike Birbiglia, Comedian, but as a child, so no one got the jokes.

What would you say people like about you?

The people who are diehard fans are maybe aware that I'm on a journey and I'm showing full disclosure. I always think of it this way: you never want to be more famous as a comedian than you are funny. I think sometimes people get too famous, not enough funny.

LANNA APISUKH FOR TIME

Do you do therapy? I've done therapy since I had my first really hard breakup when I was 22. My ex was my best friend, so I would call her to talk to her about our breakup, and at one point, she goes, "You can't call me anymore. You need to get a therapist." And I've been going to her therapist's wife ever since.

Do you have a no-go zone for jokes? What are the rules around what you share about your family? My wife Jenny and I are both writers. We always say, when something bad happens, "Go write it down, and then maybe share it in 10 years." This special is the first time where I'm telling a story that's in my present.

Do you feel fear in the comedy community right now? The decontextualization of sound and video in the last decade has made anyone who speaks into a microphone have a certain new level of self-consciousness. What does this paragraph sound like? What does this sentence sound like? What does this word sound like? You start to isolate everything, and I'm not free of that.

What do you think is behind the rise of hard-right-wing comics? Tribalism has gotten so regimented that if either side steps out of line of what their tribe is saying, they get scolded on the internet. That has radicalized some people. I don't do a lot of political jokes, but I have this one where I go, "People call us liberals coastal elites just because we live on the coast and we're better than other people. But what they don't realize is that we live part of the year in Aspen." —BELINDA LUSCOMBE

TIME COVER STORE

ENJOY TIME AT HOME

SHOP SOME OF TIME'S MOST ICONIC COVER ART

TIMECOVERSTORE.COM