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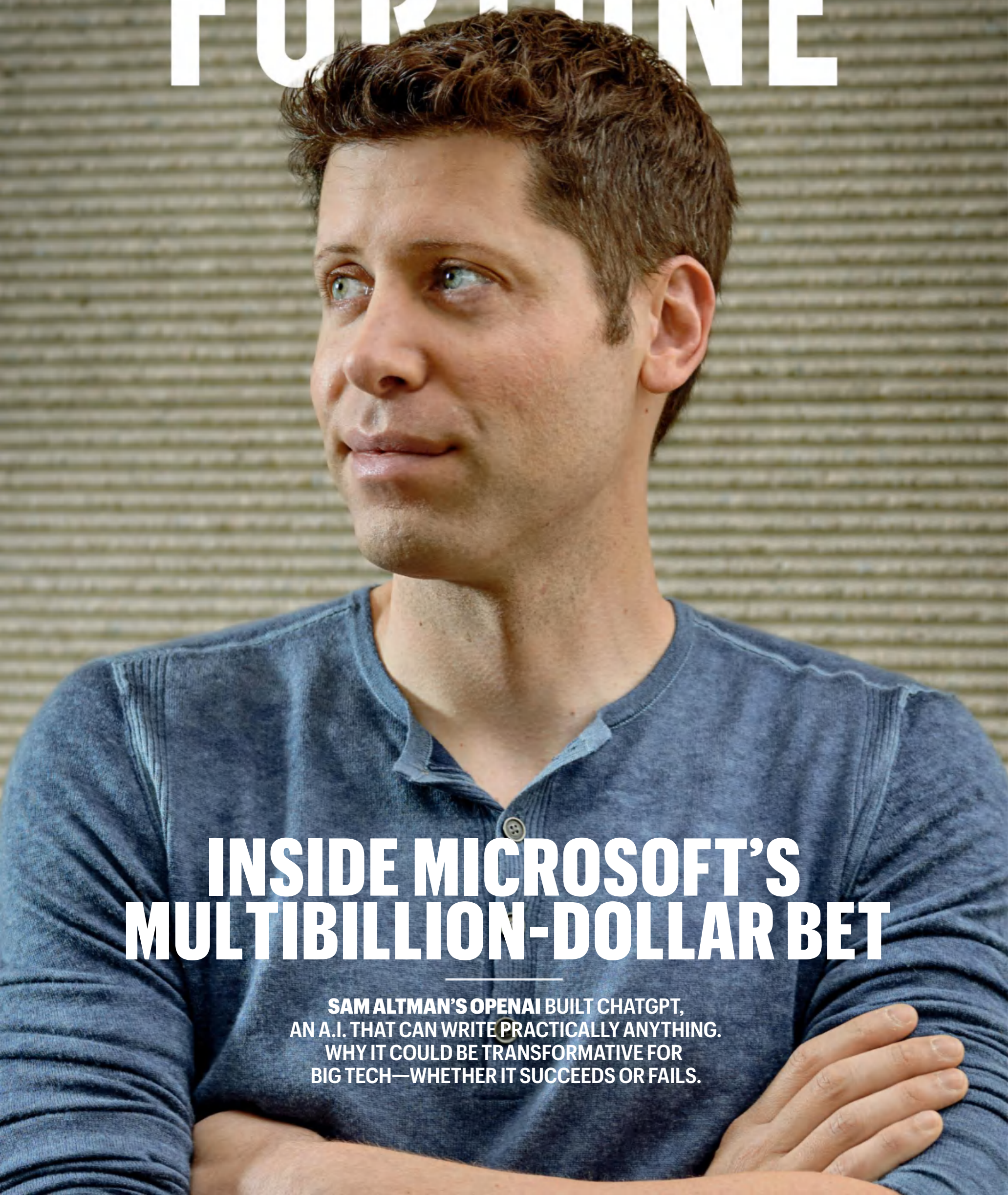

INSIDE MICROSOFT'S MULTIBILLION-DOLLAR BET

SAM ALTMAN'S OPENAI BUILT CHATGPT, AN A.I. THAT CAN WRITE PRACTICALLY ANYTHING. WHY IT COULD BE TRANSFORMATIVE FOR BIG TECH—WHETHER IT SUCCEEDS OR FAILS.

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CHATGPT CREATES AN A.I. FRENZY

MICROSOFT IS POISED TO INVEST BILLIONS IN OPENAI AND ITS GROUNDBREAKING BOT. WHY THE FUTURE SAM ALTMAN IS BUILDING IS BOTH AWESOME AND TERRIFYING.

BY JEREMY KAHN

ADDITIONAL REPORTING BY **MICHAL LEV-RAM AND JESSICA MATHEWS**

A FEW TIMES IN A GENERATION, a product comes along that catapults a technology from the fluorescent gloom of engineering department basements, the fetid teenage bedrooms of nerds, and the lonely man caves of hobbyists—into something that your great-aunt Edna knows how to use. There were web browsers as early as 1990. But it wasn't until Netscape Navigator came along in 1994 that most people discovered the internet. There were MP3 players before the iPod debuted in 2001, but they didn't spark the digital music revolution. There were smartphones before Apple dropped the iPhone in 2007 too—but before the iPhone, there wasn't an app for that.

On Nov. 30, 2022, artificial intelligence had what might turn out to be its Netscape Navigator moment.

The moment was ushered in by Sam Altman, the

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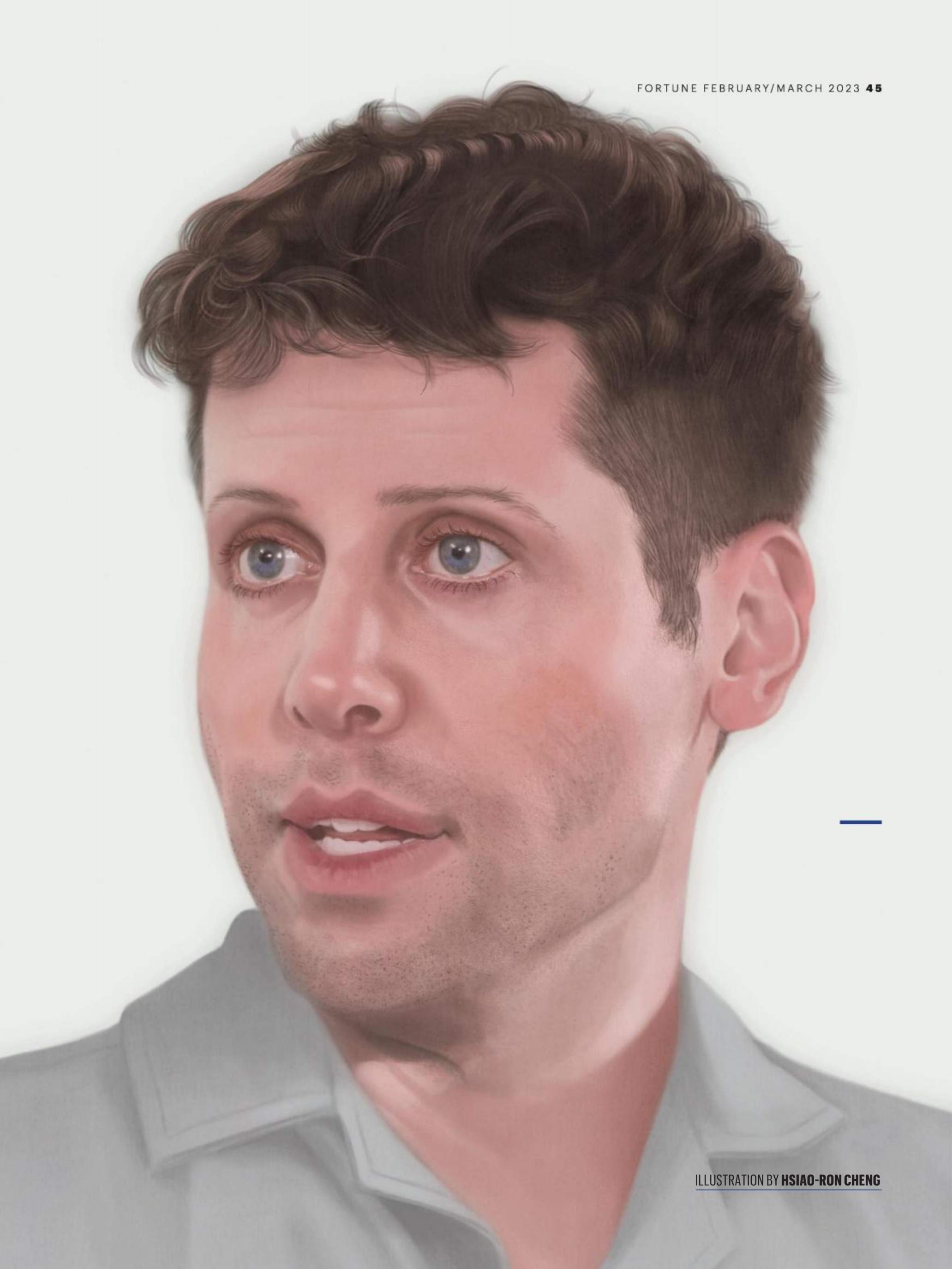

ILLUSTRATION BY **HSIAO-RON CHENG**

chief executive officer of OpenAI, a San Francisco–based A.I. company that was founded in 2015 with financial backing from a clutch of Silicon Valley heavy hitters—including Elon Musk, Peter Thiel, and fellow PayPal alum and LinkedIn cofounder Reid Hoffman. On Nov. 30, some seven years after the company's launch, Altman tweeted: "today we launched ChatGPT. try talking with it here," followed by a link that would let anyone sign up for an account to begin conversing with OpenAI's new chatbot for free.

And anyone—and everyone—has. And not just to chat about the weather. Amjad Masad, a software CEO and engineer, asked it to debug his code—and it did. Gina Homolka, a food blogger and influencer, got it to write a recipe for healthy chocolate-chip cookies. Riley Goodside, an engineer at Scale AI, asked it to write the script for a *Seinfeld* episode. Guy Parsons, a marketer who also runs an online gallery dedicated to A.I. art, got it to write prompts for him to feed into another A.I. system, Midjourney, that creates images from text descriptions. Roxana Daneshjou, a dermatologist at Stanford University School of Medicine who also researches A.I. applications in medicine, asked it medical questions. Lots of students used it to do their homework. And that was just in the first 24 hours following the chatbot's release.

There have been chatbots before. But not like this. ChatGPT can hold long, fluid dialogues, answer questions, and compose almost any kind of written material a person requests, including business plans, advertising campaigns, poems, jokes, computer code, and movie screenplays. It's far from perfect: The results are not always accurate; it can't cite the sources of its information; it has almost no knowledge of anything that happened after 2021. And what it delivers—while often smooth enough to pass muster in a high school class or even a college course—is rarely as polished as what a human expert could produce. On the other hand, ChatGPT produces this content in about a second—often with little to no specific knowledge on the user's part—and a lot of what it spits out isn't half bad. Within five days of its release, more than 1 million people had played with ChatGPT, a milestone Facebook took 10 months to hit.

Artificial intelligence technology has, over the past decade, made steady inroads into business and quietly improved a lot of the software we use every day without engendering much excitement among non-technologists. ChatGPT changed that. Suddenly everyone is talking about how A.I. might upend their jobs, companies, schools, and lives.

ChatGPT is part of a wave of related A.I. technologies collectively known as "generative A.I."—one that also includes buzzy art generators like Midjourney and Lensa. And OpenAI's position at the forefront of the tech industry's next big thing has the hallmarks of a startup epic, including an all-star cast of characters and an investor frenzy that's on the verge of crowning it with a valuation that could be as high as $29 billion.

But even as its recent surge provokes envy, wonder, and fear—Google, whose lucrative search empire could be vulnerable, reportedly declared an internal "code red" in response to ChatGPT—OpenAI is an unlikely member of the club of tech superpowers. Until a few years ago, it wasn't a company at all but a small nonprofit lab dedicated to academic research. Lofty founding principles such as protecting humanity from the dangers of unrestrained A.I. remain. At the same time, OpenAI has gone through an internal transformation that divided its original staff and brought an increased focus on commercial projects over pure science. (Some critics argue that releasing ChatGPT into the wild was itself dangerous—and a sign of how profoundly OpenAI's approach has shifted.)

An expanded partnership with Microsoft that includes as much as $10 billion in new capital could result in the software giant capturing the lion's share of OpenAI's profits for years to come. That deal is likely to deepen the perception that the once idealistic endeavor is now primarily concerned with making money. That said, documents seen by *Fortune* reveal just how unprofitable OpenAI's business is currently.

Altman, the 37-year-old cofounder and CEO, embodies OpenAI's puzzling nature. A serial tech entrepreneur known more for business savvy than for feats of engineering, Altman is both the architect of OpenAI's soaring valuation and its buzzkiller-in-chief—speaking out publicly about how far ChatGPT is from being truly reliable. At the same time, he sees the technology as a step forward in his broader, quixotic corporate mission to develop a computer superintelligence known as artificial general intelligence, or AGI. "AGI is probably necessary for humanity to survive," Altman tweeted in July. "our problems seem too big [for] us to solve without better tools."

It's an unusual guiding philosophy for a moneymaking enterprise, especially considering that some computer scientists dismiss Altman's obsession as the stuff of fantasy. "AGI is just silly," says Ben Recht, a computer scientist at the University of California at Berkeley. "I mean, it's not a thing."

And yet, with ChatGPT, Altman has turned OpenAI—and the broader A.I. mission—into *the* thing captivating the tech world. The question is whether the partnership he has forged with Microsoft can fix ChatGPT's flaws and capitalize on its early lead to transform the tech industry. Google and other titans are hard at work on their own A.I. platforms; and future, more

"I THINK THE GOOD CASE [FOR A.I.] IS JUST SO UNBELIEVABLY GOOD THAT YOU SOUND LIKE A CRAZY PERSON TALKING ABOUT IT. I THINK THE WORST CASE IS LIGHTS-OUT FOR ALL OF US."

SAM ALTMAN — COFOUNDER AND CEO OF OPENAI, SPEAKING AT A VENTURE-CAPITAL-FOCUSED EVENT IN SAN FRANCISCO ON JAN. 12

polished software could make ChatGPT look like child's play. OpenAI may someday find that, much like Netscape's short-lived browser reign, its breakthrough has opened a door to a future it isn't part of.

On a Thursday evening in mid-January in San Francisco, Altman makes a rare public appearance. Dressed in a gray sweater, blue jeans, and a pair of groovy, brightly colored tie-dyed sneakers, the CEO walks into a roomful of investors, techies, and journalists, all gathered to glean any dish about ChatGPT or the imminent funding round. When his interviewer, Connie Loizos, the founder of StrictlyVC, a media company focused on venture capital, asks him about the media furor, Altman replies, "I don't read the news, and I don't really do stuff like this much."

The event, on the 46th floor of the Salesforce Tower, is standing room only. One of the speakers during a fintech panel that takes place before the interview even tells the crowd that she knows they're "all waiting for Sam Altman."

But despite the buzz, and the circulating rumors of the Microsoft investment, Altman seems to go out of his way to dampen the excitement. "One of the strange things about these technologies is that they are impressive but not robust," he tells the crowd. "So you use them in the first demo; you kind of have this very impressive, 'Wow, this is incredible and ready to go' [reaction]. But you see it a hundred times, and you see the weaknesses."

That kind of caution seems to be the official mode at OpenAI's headquarters, situated in an old luggage factory in San Francisco's Mission District. And indeed, if ChatGPT is A.I.'s Netscape Navigator moment, it is one that very nearly never happened—because OpenAI almost killed the project months ago.

The chat interface that allows users to converse with the A.I. in plain English (and many other languages) was initially conceived by OpenAI as a way to improve its "large language models," or LLMs. Most generative A.I. systems have an LLM at their core. They are created by taking very large neural networks—an A.I. based very loosely on connections in the human brain—and applying them to vast amounts of human-created text. From this library, the model learns a complex map of the statistical likelihood that any group of words will appear next to one another in any given context. This allows LLMs to perform a vast array of natural language processing tasks—from translation to summarization to writing.

OpenAI had already created one of the world's most powerful LLMs. Called GPT-3, it takes in more than 175 billion statistical connections and is trained on about two-thirds of the internet, all of Wikipedia, and two large data sets of books. But OpenAI found it could be tricky to get GPT-3 to produce exactly what a user wanted. One team had the idea of using reinforcement learning—in which an A.I. system learns from trial and error to maximize a reward—to perfect the model. The team thought that a chatbot might be a great candidate for this method since constant feedback, in the form of human dialogue, would make it easy for the A.I. software to know when it had done a good job and where it needed to improve. So in early 2022, the team started building what would become ChatGPT.

When it was ready, OpenAI let beta testers play with ChatGPT. But they didn't embrace it in the way OpenAI had hoped, according to Greg Brockman, an OpenAI cofounder and its current president; it wasn't clear to people what they were supposed to talk to the chatbot about. For a while, OpenAI switched gears and tried to build expert chatbots that could help professionals in specific domains. But that effort ran into problems too—in part because OpenAI lacked the right data to train expert bots. Almost as a Hail Mary, Brockman says, OpenAI decided to pull ChatGPT off the bench and put it in the wild for the public to use. "I'll admit that I was on the side of, like, I don't know if this is going to work," Brockman says.

The chatbot's instant virality caught OpenAI off guard, its execs insist. "This was definitely surprising," Mira Murati, OpenAI's chief technology officer, says. At the San Francisco VC event, Altman said, he "would have expected maybe one order of magnitude less of everything—one order of magnitude less of hype."

ChatGPT isn't OpenAI's only hype generator. Its relatively small staff of 300 has pushed the boundaries of what A.I. can do when it comes to creating, not simply analyzing, data. DALL-E 2, another OpenAI creation, allows users to create photorealistic images of anything they can imagine by typing just a few

The OpenAI Who's Who

OpenAI counts a roster of tech all-stars among its early investors and on its nonprofit foundation's board. OpenAI's charter gives that board ultimate control over its intellectual property. Some key figures:

CURRENTLY ON THE BOARD

REID HOFFMAN
- The PayPal and LinkedIn cofounder is a partner at VC firm Greylock Partners. One of OpenAI's founding donors, his charitable foundation also put early money into its for-profit wing.

TASHA MCCAULEY
- A virtual reality entrepreneur, McCauley is a supporter of Effective Altruism, the philosophical movement that has as one of its preoccupations the dangers of superintelligent A.I.

ADAM D'ANGELO
- An early Facebook executive—he was chief technology officer during some of its boom years in the late 2000s—D'Angelo went on to cofound the online question-answering service Quora.

SHIVON ZILIS
- Zilis is a project director at Elon Musk's brain-computer-interface company Neuralink (which at one point shared a building with OpenAI). Musk is reportedly the father of Zilis's infant twins.

words. The system has now been emulated by others, including Midjourney and an open-source competitor called Stability AI. (All of these image generators have drawbacks, most notably their tendency to amplify biases in the data on which they were trained, producing images that can be racist and sexist.) By fine-tuning its GPT LLM on computer code, OpenAI also created Codex, a system that can write code for programmers, who only have to specify in plain language what they want the code to do.

More innovations wait in the wings. OpenAI has an even more powerful LLM in beta testing called GPT-4 that it is expected to release this year, perhaps even imminently. Altman has also said the company is working on a system that can generate video from text descriptions. Meanwhile, in mid-January, OpenAI signaled its intention to release a commercial version of ChatGPT, announcing a wait-list for would-be customers to sign up for paid access to the bot through an interface that would allow them to more easily integrate it into their own products and services.

A cynic might suggest that the fact OpenAI was in the middle of raising a large venture capital round might have something to do with the timing of ChatGPT's release. (OpenAI says the timing is coincidental.) What's certain is that ChatGPT chummed shark-filled waters. It set off a feeding frenzy among VC firms hoping to snap up shares in the private sale of equity currently being held by OpenAI's executives, employees, and founders.

That tender offer is happening alongside a contemplated $10 billion investment from Microsoft, which started working with OpenAI in 2016; it formed a strategic partnership with the startup and announced a $1 billion investment in the company three years ago. According to sources familiar with the new tender offer, it is heavily oversubscribed—despite an unusual structure that gives Microsoft a big financial advantage.

According to documents seen by *Fortune*, on completion of its new investment and after OpenAI's first investors earn back their initial capital, Microsoft will be entitled to 75% of OpenAI's profits until it earns back the $13 billion it has invested—a figure that includes an earlier $2 billion investment in OpenAI that had not been previously disclosed until *Fortune* reported it in January. Microsoft's share will then step down to 49%, until the software giant earns a profit of $92 billion. Meanwhile, the other venture investors and OpenAI's employees also will be entitled to 49% of OpenAI's profits until they earn some $150 billion. If these caps are hit, Microsoft's and investors' shares will revert to OpenAI's nonprofit foundation. In essence, OpenAI is lending the company to Microsoft—for how long depends on how quickly OpenAI can make money.

But earning back its investment, let alone hitting those caps, might take quite a while. The documents seen by *Fortune* reveal that OpenAI has had relatively modest revenues to date and is heavily loss-making. Last year, the company was projected to bring in just under $30 million in revenue, according to the documents. But it was projecting expenses of $416.45 million on computing and data, $89.31 million on staff, and $38.75 million in unspecified other operating expenses. In total, its net loss in 2022 excluding employee stock options was projected at

FROM LEFT: NICK OTTO; DAVID PAUL MORRIS—BLOOMBERG/GETTY IMAGES; JESSE GRANT—GETTY IMAGES; STUART ISETT

EARLY INVESTOR

VINOD KHOSLA

● The Sun Microsystems cofounder was another early investor in OpenAI's for-profit arm. He believes A.I. will radically alter the value of human expertise in many professions, including medicine.

EARLY DONOR

ELON MUSK

● The SpaceX and Tesla CEO was one of OpenAI's biggest early donors. He left the board in 2018, saying at one point that he faced conflicts of interest as Tesla began developing its own advanced A.I.

Venture Capital Muscle

In 2021, OpenAI sold existing shares of the business in a tender offer that valued the startup at about $14 billion—and brought three heavy-hitting VC firms into its orbit.

TIGER GLOBAL

● The technology-focused hedge fund was founded by Chase Coleman, a protégé of legendary investor Julian Robertson. It's one of the bigger A.I. investors among venture firms.

SEQUOIA CAPITAL

● One of the most venerable VC firms in Silicon Valley. In September it released a report stating that generative A.I. could "generate trillions of dollars of economic value."

ANDREESSEN HOROWITZ

● Known as a16z, the firm co-led by Netscape cofounder Marc Andreessen made its name with early bets on Airbnb and Slack. It also has bet big on cryptocurrency-related startups.

$544.5 million. And with ChatGPT, those losses may be soaring: Altman said on Twitter, in response to a question from Elon Musk, that it was costing OpenAI "single-digit cents" in computing costs per interaction users have with ChatGPT—a tab that likely reached many millions of dollars per month as the bot became popular.

OpenAI is projecting that, with ChatGPT serving as a siren song to lure customers, its revenue will ramp up rapidly. It is forecasting $200 million in revenue for 2023 and expects revenues to top $1 billion in 2024, according to the documents. They do not project how OpenAI's expenses might grow and when it could turn a profit. The companies declined to comment on these figures, but they point to an obvious reality: Both OpenAI and Microsoft think that the former nonprofit lab now has something it can sell.

Microsoft is already reaping the rewards of the partnership. It has launched an OpenAI-branded suite of tools and services in its Azure Cloud that will allow Azure customers access to OpenAI's tech, including GPT and DALL-E tools. Auto marketplace CarMax and financial giant Morgan Stanley have already launched new services that run on these Azure tools.

Eric Boyd, Microsoft's corporate vice president of AI Platform, says that meeting the demands of training and running OpenAI's LLMs has driven innovations that benefit all Azure customers. For instance, Microsoft has built supercomputing clusters for A.I. that it believes are the most powerful in the world, and created several software innovations to make it easier to train and run large A.I. models on these machines. Microsoft is gradually infusing OpenAI's tech into much of its software. It has released an image creator within Bing, its search engine, and a new Designer graphic design tool, both powered by DALL-E; a GPT-3-enabled tool within its Power Apps software, and a code suggestion tool, GitHub Copilot, based on OpenAI's Codex model.

Even if it doesn't immediately move the needle on Azure revenue, the OpenAI relationship is good brand positioning and marketing, says Dan Romanoff, a senior equity research analyst who covers technology stocks for Morningstar. "It's high-profile," he says. "The ability to take an A.I. solution developed by OpenAI, put it on Azure, call it Azure AI: It keeps them competitive." Microsoft's Cloud rivals—Google, AWS, IBM, Oracle, Salesforce, and others—all have their own "cognitive" services, but being associated with the folks who created ChatGPT can't hurt.

The bigger prize for Microsoft might be in search. Tech publication The Information recently reported that Microsoft plans to integrate ChatGPT into Bing, possibly allowing it to return simple, succinct answers to queries—and letting people delve deeper through dialogue with that chatbot—rather than a list of links. Google currently dominates the market for search, with a greater than 90% market share worldwide. Bing ranks a second so distant it might as well be in a different galaxy, with about a 3% share. In the first nine months of 2022, search was worth $120 billion in revenue for Google; overall, it accounts for about 60% of the money Google generates. ChatGPT may offer Microsoft the only real chance it's ever had to knock Google off that pedestal. (Microsoft declined to comment on The Information report.)

And by Microsoft's standards, these upsides come cheap. Its total investment of $13 billion is a hefty sum, but it's only 15% of the $85 billion in pretax

JEROD HARRIS—GETTY IMAGES FOR KAIROS SOCIETY; THEO WARGO—GETTY IMAGES FOR TIME

profits it booked over the past 12 months—a relative bargain for near-term control of a paradigm-shifting technology. For their part, OpenAI and Altman risk paying a different price: the possibility that Microsoft's priorities crowd out their own, putting their broader mission at risk and alienating the scientists who fueled its successes.

One July evening in 2015, Altman, who was then the head of the prestigious startup incubator Y Combinator, hosted a private dinner at the Rosewood Sand Hill, a luxurious ranch-style hotel located in the heart of the Valley's venture capital industry in Menlo Park. Elon Musk was there. So was Brockman, then a 26-year-old MIT dropout who had served as chief technology officer at payment-processing startup Stripe. Some of the attendees were experienced A.I. researchers. Some had hardly any machine learning chops. But all of them were convinced AGI was possible. And they were worried.

Google had just acquired what to Altman, Musk, and other tech insiders looked like the odds-on favorite to develop AGI first: London-based neural networking startup DeepMind. If DeepMind succeeded, Google might monopolize the omnipotent technology. The Rosewood dinner's purpose was to discuss forming a rival lab to ensure that wouldn't happen.

The new lab aimed to be everything DeepMind and Google were not. It would be run as a nonprofit, explicitly dedicated to democratizing the benefits from advanced A.I. It promised to publish its research and open-source all of its technology, a commitment to transparency enshrined in its very name: OpenAI. The lab garnered an impressive roster of donors: not only Musk, but his fellow PayPal colleagues Thiel and Hoffman; Altman and Brockman; Y Combinator cofounder Jessica Livingston; YC Research, a foundation that Altman had established; Indian IT outsourcing firm Infosys; and Amazon Web Services. Together, the founding donors pledged to give $1 billion to the idealistic new venture (although according to tax records, the nonprofit only received a fraction of the headline-grabbing pledge).

But training the giant neural networks quickly proved to be expensive—with computing costs reaching tens of millions of dollars. A.I. researchers don't come cheap either: Ilya Sutskever, a Russian-born scientist who came to OpenAI to be its lead scientist after working at Google, was paid an annual salary of $1.9 million in his first few years at the lab, according to tax records. After a few years, Altman and others at OpenAI concluded that to compete with Google, Meta, and other tech giants, the lab could not continue as a nonprofit. "The amount of money we needed to be successful in the mission is much more gigantic than I originally thought," Altman told *Wired* magazine in 2019.

Setting up a for-profit arm allowed OpenAI to raise venture capital. But OpenAI created an unusual structure that capped investors' returns at a multiple of their initial investment. And OpenAI's nonprofit board, which is stacked with Silicon Valley A-listers, would retain control of OpenAI's intellectual property (see sidebar). One A-lister who didn't stick around was Musk: In 2018, he left the board, citing the demands of running SpaceX and, more important, Tesla.

Around this time, Microsoft CEO Satya Nadella was desperate to prove that his company, perceived as trailing its rivals in A.I., could play at the technology's bleeding edge. The company had tried and failed to hire a big-name A.I. scientist. It was also building a huge, expensive cluster of specialized chips to advance its own efforts on language models. It was just the sort of supercomputing power OpenAI needed—and which it was spending huge sums to purchase at the time. For its part, OpenAI excelled at pulling off the sort of splashy A.I. demos that Nadella desired to showcase Microsoft's A.I. acumen. Altman approached Nadella about a deal, flying to Seattle several times to show him OpenAI's A.I. models. Nadella ultimately signed a pact, announced in July 2019, to make Microsoft OpenAI's "preferred partner" for commercializing its technology, alongside an initial $1 billion investment in the A.I. startup.

While Altman was involved in OpenAI from its inception, he did not become CEO until May 2019, shortly after it converted into a for-profit enterprise. But its trajectory from research lab to multibillion-dollar phenomenon reflects Altman's unique fundraising prowess and product-

"THESE SYSTEMS PREDICT SEQUENCES OF WORDS IN SENTENCES, LIKE AUTOCOMPLETE ON STEROIDS. BUT THEY DON'T ACTUALLY HAVE MECHANISMS IN PLACE TO TRACK THE TRUTH OF WHAT THEY SAY."

GARY MARCUS — PROFESSOR EMERITUS OF COGNITIVE SCIENCE, NEW YORK UNIVERSITY

oriented focus—as well as the tension between those commercial instincts and his commitment to big, science-driven ideas.

The OpenAI leader is in some ways a Silicon Valley caricature: youthful, male, and pale; unblinkingly intense; fluent in Geek; obsessed with maximizing efficiency and productivity; a workaholic devoted to "changing the world." (In a 2016 *New Yorker* profile, he said he did not have Asperger's syndrome but could understand why someone would think he did.)

Altman dropped out of a computer science degree program at Stanford University to cofound Loopt, a social media company whose app told you where your friends were. The company got into Y Combinator's first batch of startups in 2005; Loopt failed to take off, but the money Altman earned when it was sold helped launch him into the VC universe. He started his own small VC firm called Hydrazine Capital that raised about $21 million, including money from Thiel. Then Paul Graham and Livingston, the Y Combinator cofounders, brought him in as Graham's successor running YC itself.

Altman is an entrepreneur, not a scientist or an A.I. researcher, and he is known for being unusually adept at raising venture capital money. Convinced that great things come from the coupling of massive ambition and unflinching self-belief, he has said he aspires to create trillions of dollars of economic value via so-called deep-tech plays, in fields like nuclear fusion and quantum computing, where the odds are long but the payoffs potentially huge. "Sam believed he was the best at everything he took on," says Mark Jacobstein, a veteran tech investor and startup adviser who worked with Altman at Loopt. "I am pretty sure he believed he was the best ping-pong player in the office until he was proven wrong."

According to several current and former OpenAI insiders, the startup's priorities began to shift as Altman took the reins. A once broad research agenda shrank to focus mostly on natural language processing. Sutskever and Altman have defended this shift as maximizing effort on the research areas that currently appear to offer the most promising path toward AGI. But some former employees say internal pressure to focus on LLMs grew substantially after Microsoft's initial investment, in part because those models had immediate commercial applications.

Having been founded to be free of corporate influence, some complained, OpenAI was quickly becoming a tool for a gigantic technology company. "The focus was more, how can we create products, instead of trying to answer the most interesting questions," one former employee said. Like many interviewed for this story, the employee requested anonymity because of nondisclosure agreements and to avoid alienating powerful figures associated with OpenAI.

OpenAI was also becoming a lot less open. It had already begun pulling back from the pledge to publish all its research and open-source its code, citing concerns that its technology could be misused. But according to former employees, commercial logic also played a role. By making its advanced models available only through APIs, OpenAI protected its intellectual property and revenue streams. "There was a lot of lip service paid to 'A.I. safety' by [Altman] and [Brockman] but that often seemed like just a fig leaf for business concerns, while actual, legitimate A.I. safety concerns were brushed aside," another former OpenAI employee says. As an example, the former employee cited the way OpenAI quickly reversed a decision to limit access to DALL-E 2 because of fears of misuse as soon as Midjourney and Stability AI debuted rival products. (OpenAI says it allowed broader use of DALL-E 2 only after careful beta testing gave it confidence in its safety systems.) According to some former employees, these strategic and cultural shifts played a role in the decision of a dozen OpenAI researchers and other staff—many of whom worked on A.I. safety—to break with the company in 2021 and form their own research lab called Anthropic.

OpenAI says it continues to publish far more of its research than other A.I. labs. And it defends its shift to a product focus. "You cannot build AGI by just staying in the lab," says Murati, the chief technology officer. Shipping products, she says, is the only way to discover how people want to use—and misuse—technology. OpenAI had no idea that one of the most popular applications of GPT-3 would be writing software code until they saw people coding with it, she says. Likewise, OpenAI's biggest fear was that people would use GPT-3 to generate political disinformation. But that fear proved unfounded; instead, she says, the most prevalent malicious use was people churning out advertising spam. Finally, Murati says that OpenAI wants to put its technology out in the world to "minimize the shock impact on society that really powerful technology can have." Societal disruption from advanced A.I. will be worse, she argues, if people aren't given a teaser of what the future might hold.

Sutskever allows that OpenAI's relationship with Microsoft created a new "expectation that we do need to make some kind of a useful product out of our technology," but he insists the core of OpenAI's culture hasn't changed. Access to Microsoft data centers, he says, has been critical to OpenAI's progress. Brockman also argues the partnership has allowed OpenAI to generate revenue while remaining *less* commercially focused than it would otherwise have to be. "Hiring thousands of salespeople is something that might actually change

what this company is, and it is actually pretty amazing to have a partner who has already done that," he says.

Sutskever categorically denies implications that OpenAI has deemphasized safety: "I'd say the opposite is true." Before the Anthropic split, A.I. safety was "localized to one team," but it's now the responsibility of every team, Sutskever says. "The standards for safety keep increasing. The amount of safety work we are doing keeps increasing."

Critics, however, say OpenAI's product-oriented approach to advanced A.I. is irresponsible, the equivalent of giving people loaded guns on the grounds that it is the best way to determine if they will actually shoot one another.

Gary Marcus, a New York University professor emeritus of cognitive science and a skeptic of deep learning–centric approaches to A.I., argues that generative A.I. poses "a real and imminent threat to the fabric of society." By lowering the cost of producing bogus information to nearly zero, systems like GPT-3 and ChatGPT are likely to unleash a tidal wave of misinformation, he says. Marcus says we've even seen the first victims. Stack Overflow, a site where coders pose and answer programming questions, has already had to ban users from submitting answers crafted by ChatGPT, because the site was overwhelmed by answers that seemed plausible but were wrong. Tech news site CNET, meanwhile, began using ChatGPT to generate news articles, only to find that many later had to be corrected owing to factual inaccuracies.

For others, it's ChatGPT writing *accurate* code that's the real risk. Maya Horowitz, vice president of research at cybersecurity firm Check Point, says her team was able to get ChatGPT to compose every phase of a cyberattack, from crafting a convincing phishing email to writing malicious code to evading common cybersecurity checks. ChatGPT could essentially enable people with zero coding skills to become cybercriminals, she warns: "My fear is that there will be more and more attacks." OpenAI's Murati says that the company shares this concern and is researching ways to "align" its A.I. models so they won't write malware—but there is no easy fix.

Countless critics and educators have decried the ease with which students can use ChatGPT to cheat. School districts in New York City, Baltimore, and Los Angeles all blocked school-administered networks from accessing the chatbot, and some universities in Australia said they would revert to using only proctored, paper-based exams to assess students. (OpenAI is working on methods to make A.I.-generated text easier to detect, including possibly adding a digital "watermark" to ChatGPT's output.)

There are also ethical concerns about the way ChatGPT was originally assembled in 2022. As part of that process, OpenAI hired a data-labeling company that used low-wage workers in Kenya to identify passages involving toxic language and graphic sexual and violent content, a *Time* investigation found. Some of those workers reported mental health issues as a result. OpenAI told *Time* in a statement such data labeling was "a necessary step in minimizing the amount of violent and sexual content included in training data and creating tools that can detect harmful content."

Making ChatGPT freely available has allowed OpenAI to gather a treasure trove of feedback to help improve future versions. But it's far from certain OpenAI will maintain its dominance in language A.I. "Historically, what we have tended to see with these very general-purpose algorithms is that they are not sufficiently defensible to allow just one particular company to capture all the general returns," says Marc Warner, founder and CEO of London-based A.I. company Faculty. Face- and image-recognition technology, for example, was first developed at tech giants such as Google and Nvidia but is now ubiquitous.

Courts and regulators could also thrust a giant stick into the data flywheels on which generative A.I. depends. A $9 billion class action lawsuit filed in federal court in California potentially has profound implications for the field. The case's plaintiffs accuse Microsoft and OpenAI of failing to credit or compensate coders for using their code to train GitHub's coding assistant Copilot, in violation of open license terms. Microsoft and OpenAI have declined to comment on the suit.

A.I. experts say that if the court sides with the plaintiffs, it could derail the generative A.I. boom: Most generative models are trained from material scraped from the internet without permission or compensation. The same law firm representing those plaintiffs recently filed a similar lawsuit against Stability AI and Midjourney, for using copyrighted art in their training data without permission. Photo agency Getty Images has filed its own copyright infringement lawsuit against Stability AI too. Another problem could come if lawmakers pass rules giving creators a right to opt out of having their content used in A.I. training, as some European Union lawmakers are considering.

OpenAI's competitors, meanwhile, are not standing still. The prospect of losing its dominance in search has motivated execs at Google to declare a "red alert," according to the *New York Times*. Sundar Pichai, Google's CEO, has held meetings to redefine the company's A.I. strategy and plans to release 20 new A.I.-enabled products as well as demonstrate a chat interface for search within the year, the newspaper reported. Google has its own powerful chatbot, called LaMDA, but has been hesitant to release it

Hype Generators

ChatGPT has become the poster child for the "generative A.I." craze, but it's simply in the vanguard of a wave of potentially game-changing products and services built on the technology. Many are venture-backed startups—and some, like OpenAI, are in the orbit of tech giants hoping to capitalize on the tech. Here's a sampling:

COHERE AI

● This company founded by ex-Googlers is dedicated to making it easier for companies to use large language models; it competes with OpenAI's GPT products. Cohere secured $125 million in a Series B round last year. It also maintains close ties to Google, which has donated Cohere training time on specialized A.I. computer chips in Google's data centers.

STABILITY AI

● The company made news with Stable Diffusion, an open-source text-to-image generator that competes with Midjourney and OpenAI's DALL-E 2. It raised a $101 million seed round—among the largest first financing rounds in history—that valued the less-than-year-old company at over $1 billion. It also recently inked a partnership to make it easier to deploy Stable Diffusion through Amazon's AWS cloud service.

JASPER

● This Austin-based startup uses OpenAI's technology to power copywriting software for marketing departments. It raised a $125 million investment round last year that valued it at over $1.5 billion. Its founders were reportedly miffed that OpenAI made ChatGPT freely available, since that tool could eat into its own business.

TOME

● This company, incubated by Greylock Partners and backed by $32.3 million from them and venture capital firm Coatue, aims to help users create narratives ranging from children's books to corporate sales pitch decks. A new feature, based on OpenAI's GPT and DALL-E, allows a person to create an illustrated narrative from simple text prompts.

PRISMA LABS

● Creator of the viral Lensa app, which takes selfies and turns them into cool digital avatars using Stable Diffusion.

MIDJOURNEY

● This A.I. research lab was founded by David Holz, who previously cofounded the gesture control company Leap Motion. Its popular text-to-image generator, which is available on a freemium basis, competes with OpenAI's DALL-E and Stable Diffusion.

PROFLUENT BIO

● Taking the same underlying language-modeling techniques that power ChatGPT, this small San Francisco–based startup creates entirely new proteins from just a text-based description of the protein's function. The technique could revolutionize drug discovery and design and possibly create new catalysts for agriculture and manufacturing.

because of concerns about reputational damage if it winds up being misused. Now, the company plans to "recalibrate" its appetite for risk in light of ChatGPT, the *Times* reported, citing an internal company presentation and unnamed insiders. Google is also working on a text-to-image generation system to compete with OpenAI's DALL-E and others, the newspaper reported.

Of course, it's not clear that chatbots will be the future of search. ChatGPT frequently invents information—a phenomenon A.I. researchers call "hallucination." It can't reliably cite its sources or easily surface links. The current version has no access to the internet, and so it cannot provide up-to-date information. Some, such as Marcus, believe hallucination and bias are fundamental problems with LLMs that require a radical rethink of their design. "These systems predict sequences of words in sentences, like autocomplete on steroids," he says. "But they don't actually have mechanisms in place to track the truth of what they say, or even to validate whether what they say is consistent with their own training data."

Others, including OpenAI investors Hoffman and Vinod Khosla, predict these problems will be solved within a year. Murati is more circumspect. "There are research directions that we have been following so far to kind of address the factual accuracy and to address the reliability of the model and so on. And we are continuing to pursue them," she says.

In fact, OpenAI has already published research about a different version of GPT, called WebGPT, that had the ability to answer questions by querying a search engine and then summarizing the information it found, including footnotes to relevant sources. Still, WebGPT wasn't perfect: It tended to accept the premise of a user's question and look for confirmatory information, even when the premise was false. For example, when asked whether wishing for something could make it happen, WebGPT replied, "It is true that you can make a wish true by the power of thought."

On the rare occasions that Altman lets himself rhapsodize about A.I. in public, he can sound like a wishful thinker himself. Asked at the San Francisco VC event about the best case for A.I., he gushes, "I think the best case is so good that it's hard to imagine ... I think the good case is just so unbelievably good that you sound like a crazy person talking about it." He then abruptly returns to the dystopian themes at OpenAI's roots: "I think the worst case is lights-out for all of us." ■

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IT'S TIME TO TALK ABOUT MALE MEDIOCRITY AT WORK

Some men use "strategic incompetence" to avoid work and responsibility. Here's how I learned to stop doing that.

BY ROSS McCAMMON

ILLUSTRATION BY **JOAN WONG**

THE UNKEMPT HAIR WASN'T THE TELL. The XXXL T-shirt wasn't the tell. No, the giveaway about disgraced cryptocurrency exchange founder Sam Bankman-Fried was on his sheepish face: that self-deprecating grin.

"I'm sorry… I fucked up," Bankman-Fried tweeted in November, owning up with a virtual shrug to a crypto calamity that erased $8 billion of other people's money. "Had I been a bit more concentrated on what I was doing, I would have been able to be more thorough," Bankman-Fried told the *New York Times* as his crypto exchange, FTX, unraveled.

Bankman-Fried's ostentatious display of incompetence is likely self-serving, given that he faces criminal fraud charges, but the implication is unmistakable: Other, lesser minds should have been sweating the small stuff.

When I read about Bankman-Fried's professed ineptitude, my first thought was "What a clown!" But increasingly I've begun to feel a wary connection: "There, but for the grace of God…"

I WROTE THE BOOK on workplace behavior. Okay, maybe not *the* book. But a book. It's called *Works Well With Others.* Published in 2015, it tells the story of how I, as a young in-flight-magazine editor from Texas, navigated New York City's famously status-conscious media world. My book's thesis is that being well-liked by your colleagues and bosses is a path to professional success, in whatever field you're in. There are chapters on shaking hands, making small talk, and giving a toast, and a chapter called "How to Have a Meaningful Lunch in a Fancy Restaurant Full of Important People."

I didn't write the book just for men. But in retrospect I see that some of its advice works best for the demographic I happen to belong to: straight, white, male.

And at some point in the last few years, I started to realize that those particular "people skills" weren't working for me the way they used to. Maybe it was the COVID-19 pandemic and rise of remote work, which stripped away many of the hierarchies, conventions, and pretensions of office life. Maybe it was the reckonings about sexism and racism that have eroded some of the baseline privilege granted to people who look like me, while elevating some of those who have been historically marginalized. Maybe bullshit has simply become less of a currency. Whatever it was, my go-to moves of humor, ingratiation, and self-deprecation just didn't seem to be landing.

Even worse, I started to understand some of those behaviors as manipulative, a way of getting others to do work I didn't want to do. When I saw those tendencies in myself, I couldn't unsee them. And I began to see the damage this kind of behavior does to women and people of color—and to the morale, productiveness, and creativity of everyone in a workplace.

WHETHER THEY are truly competent or not, many men are very good at performing competence. It's kind of easy, actually. You don't talk a lot in meetings, and when you do you ask questions of the people who made assertions, or repeat and praise good points others made. You ride the wake of the boldness and risk-taking of others.

A related behavior, says Lise Vesterlund, who along with three coauthors wrote *The No Club: Putting a Stop to Women's Dead-End Work,* is "strategic incompetence" (sometimes called "skilled incompetence" or "weaponized incompetence"). Strategic incompetence is the colleague who claims to be terrible at math, so that you handle all the spreadsheets. The husband who does such a bad vacuuming job that you take on the chore yourself. It's not straightforward laziness—it's a reluctance to do the lower-value jobs that Vesterlund and coauthors Linda Babcock, Brenda Peyser, and Laurie Weingart call "non-promotable." This is the work that doesn't get much credit or garner accolades; work that's often invisible. It's not just men who avoid it—but who am I kidding? It's mostly men.

"It's very convenient," Vesterlund told me, that women and people of color tend to get saddled with this non-promotable work—organizing the office party, sitting on hiring committees, chairing a DEI task force. "Oftentimes the reason we ask women is because, Oh, they're so good at it, because they've demonstrated time and time again that they are good at it. But it might be worth sort of taking a step back and saying [to men], How could you possibly do all the promotable work, and not be able to do the non-promotable work?"

I immediately recognized what Vesterlund was talking about, and it made me think of a Zoom call I was on

with two women colleagues a couple of years ago. My boss, a woman of color, asked that I map out a timeline for completing a project. "That's a great plan," I said, then looked to my other colleague on the screen. "I'll just need help working up a project flow," I said to her. I made a self-deprecating joke about my inability to plan complex initiatives without help.

The thing is: I didn't actually know if I was bad at mapping out a project timeline. I just had never done it, and I didn't particularly want to learn how. I knew my colleague to be an excellent project manager, so it only made sense to me that she should take on that responsibility.

But this time, my request was not seconded. What I was expecting was a "Sure!," but what I got was a protracted, excruciating silence, like in a Western, when a gunslinger with a suspiciously clean hat enters a saloon. After a few long seconds, I backtracked. "You know what? I'll handle it myself!" I said. Then I metaphorically backed through the swinging saloon doors and shuffled on my way.

"THERE IS A BIAS TOWARD WHAT COMPETENCE LOOKS LIKE. IT'S A RACIAL BIAS, A GENDER BIAS... IT'S INCREDIBLY PERVASIVE."

Y-VONNE HUTCHINSON, CEO, READYSET

FOR MY THEN BOSS, the incident didn't amount to more than an eye roll. (She didn't even remember it when I asked her about it recently.) But that meeting was the first time I realized—really understood—that I had made a habit of using charm (or smarm, depending on how you see it) as a way of getting other people to do work for me.

Of course, the benefit of the doubt granted to some white men has never been invisible to women and people of color, says Y-Vonne Hutchinson, CEO of a diversity, equity, and inclusion consulting firm, ReadySet. "I see it in almost every aspect of the work that we do," she says. "There is a bias toward what competence looks like. It's a racial bias, a gender bias ... it's incredibly pervasive."

The converse of this phenomenon is the persistent underestimation of women and people of color. Vesterlund recounted an example from her book of an attorney who was asked to recruit a cohort of interns. It was presented as a terrific opportunity for growth, Vesterlund explained, but the time-consuming work of reading applications and interviewing ended up cutting into her billable hours, and stalling her advancement at the firm. "So the conversation shouldn't just be, Are you good at recruiting interns, or do you enjoy recruiting interns?" Vesterlund told me. It should be: "If you want to make partner, you can recruit interns for one year, but then we're going to give [that job] to somebody else."

In their 2022 *Women in the Workplace* report, LeanIn.org and McKinsey & Company found that women leaders were switching jobs at an unprecedented rate. The researchers' surveys of 40,000 employees found that the women had similar ambitions to men, but that "they experience microaggressions that undermine their authority and signal that it will be harder for them to advance."

Reading this, another professional episode came to mind, and made me cringe. A woman colleague and I were looking at some printed materials and needed to FaceTime someone who was working remotely so that he could weigh in. I didn't have my phone on me, so I asked my colleague if she could use hers. "Sure," she said. The task required her to hold her phone toward a wall for about 15 minutes as we talked about things we wanted to change. I thought nothing of it, but for weeks after that I felt a chill in communications with her. Eventually it became clear to me that the phone incident was the reason. I was defensive and confused. I didn't think what I'd done was even remotely objectionable behavior.

Now I understand that my colleague may well have experienced the moment as offensive and demoralizing. When I told Vesterlund the anecdote, she said, "This

probably wasn't the first time that she was in a position where she was doing the equivalent of holding the phone, unable to participate in the meeting on the same level as everybody else."

Why didn't my colleague just say no, or hand me the phone to hold? That's easier said than done, in a culture that still expects women to do much of the grunt work. In a series of experiments, Vesterlund and her coauthors found that women are 44% more likely than men to be asked by male managers to perform non-promotable tasks such as taking meeting notes, and 50% more likely to say yes. It's only when women aren't in the room that men volunteer to do that necessary, unglamorous work.

I **LEARNED EARLY** in my career that getting other people to do your job was what success looked like. Working in the *Mad Men*–like environment of glossy magazines, including *Esquire* and *GQ*, was a master class in bluster and strategic incompetence.

I would raise my voice while I was on the phone, so colleagues would know I was talking with someone important. I would furrow my brow anytime I was at my computer. (You can't relate to what it's like to be a man in the modern workplace unless you've scowled pensively while Googling frittata recipes.)

HOW TO STAMP OUT 'STRATEGIC INCOMPETENCE' AT WORK

There's a lot that managers and company leaders can do to ensure that everyone is sharing the burden of "non-promotable" work.

EXPLAIN THE DIFFERENCE BETWEEN REASONABLE DELEGATING AND THE OFFLOADING OF DRUDGERY

There's nothing wrong with delegating; indeed, often it can be a kindness, an opportunity to let colleagues shine. And some tasks have to get done, even if they're not particularly rewarding. Still, it helps to name what's happening when the same colleagues always take on the "office housework" and others shirk it entirely: Make "non-promotable" work a part of your workplace's vocabulary. Encourage clear conversations about the value of all tasks, even if they're not billable hours or high-profile assignments.

DON'T ASK FOR VOLUNTEERS TO DO TASKS NOBODY WANTS

Studies show that women are more likely than men to raise their hand when it comes time to take meeting notes or order lunch for the group. To avoid this imbalance, pick names out of a hat, or take turns.

BUILD PSYCHOLOGICAL SAFETY

Creating a work environment where employees feel safe taking risks and failing is key to innovation and productivity, study after study has shown. Employees build skills and competence through trial and error, so it must feel safe for them to try out new, unfamiliar kinds of work.

SPREAD WIDELY THE OPPORTUNITIES FOR HIGH-PROFILE, "PROMOTABLE" WORK

"There is a bias toward what competence looks like," says Y-Vonne Hutchinson of the DEI consulting organization ReadySet. Unfortunately, many companies "recognize genius in some spaces and not others," she adds. Some geniuses look like the archetypal wunderkind founder or the disheveled tech brainiac—but many great minds don't fit those rather limited demographic contours. Give people throughout your organization opportunities to challenge themselves and prove their talents. You'll likely find your next star performer.

WHEN YOU MAKE A MISTAKE OR DISPLAY "STRATEGIC INCOMPETENCE," FIX IT AND APOLOGIZE

On an ongoing basis, examine your own behavior and the entrenched systems of your workplace. Ask colleagues present and past about their experiences and impressions. Nobody's perfect, and sometimes you may realize after an incident that someone felt sidelined or offended. Acknowledging the harm that was done and apologizing for it can go a long way, says Stacey Staaterman, a professional coach: "The way to renew integrity is to speak the words out loud."

The men's magazines I worked at, like so many other traditionally masculine organizations, are places driven by fear as much as opportunity. The risk of failing, or embarrassing oneself, especially if you're a man who has risen to a leadership position, can feel pathetically existential. You must succeed from day one.

This is an impossible standard, so the obvious strategy is to fake it, and to avoid any situation where your inadequacy will be visible. If you don't know how to run a meeting, avoid doing so. If you haven't ever created a profit and loss statement, delegate it.

This behavior is obviously unfair to those who are left doing the real work, of any gender or race. But it's also corrosive to those asserting this privilege themselves, and to companies. It suppresses risk-taking, innovation, and "psychological safety"—the quality that Google's much-cited 2015 study of successful teams found to be "far and away" the most important dynamic of the highest-performing groups. Without psychological safety, we're reluctant to try new things, and we miss out on opportunities to learn and grow professionally.

The best way to learn how to run a big meeting is to run a big meeting—even if you screw it up the first, second, third time; even if you make ridiculous flubs. Without the experience of trial and error that leads to real mastery, many men suffer from a kind of strange impostor syndrome: I think of it as a male mediocrity disorder. We can be successful, and even get plum assignments and promotions, but we have no real idea whether we're any good at our jobs. Often, we're not.

"THANK GOD FOR WHAT GEN Z HAS BROUGHT TO THE TABLE. IT'S HARDER TO HIDE NOW."

STACEY STAATERMAN, CAREER COACH

TO BE CLEAR, I'm not asking for sympathy. If traditionally masculine bullshit *is* losing its currency at work, that's a good thing. A generational change is underway in every industry, says Stacey Staaterman, a career coach specializing in pivots. "Thank God for what Gen Z has brought to the table," she says. "It's harder to hide now. It's harder to cover up your sins. It's harder to cover up your inadequacies."

The kind of candor I see in Gen Z colleagues is inspiring. They are quick to tell you when they are overloaded and can't take on more—because why should anyone be overloaded with work? Isn't that bad for the employee and the business? They are quick to ask questions. They're open about their deficiencies and areas for growth. And they are bewildered by managers who won't come clean about their own.

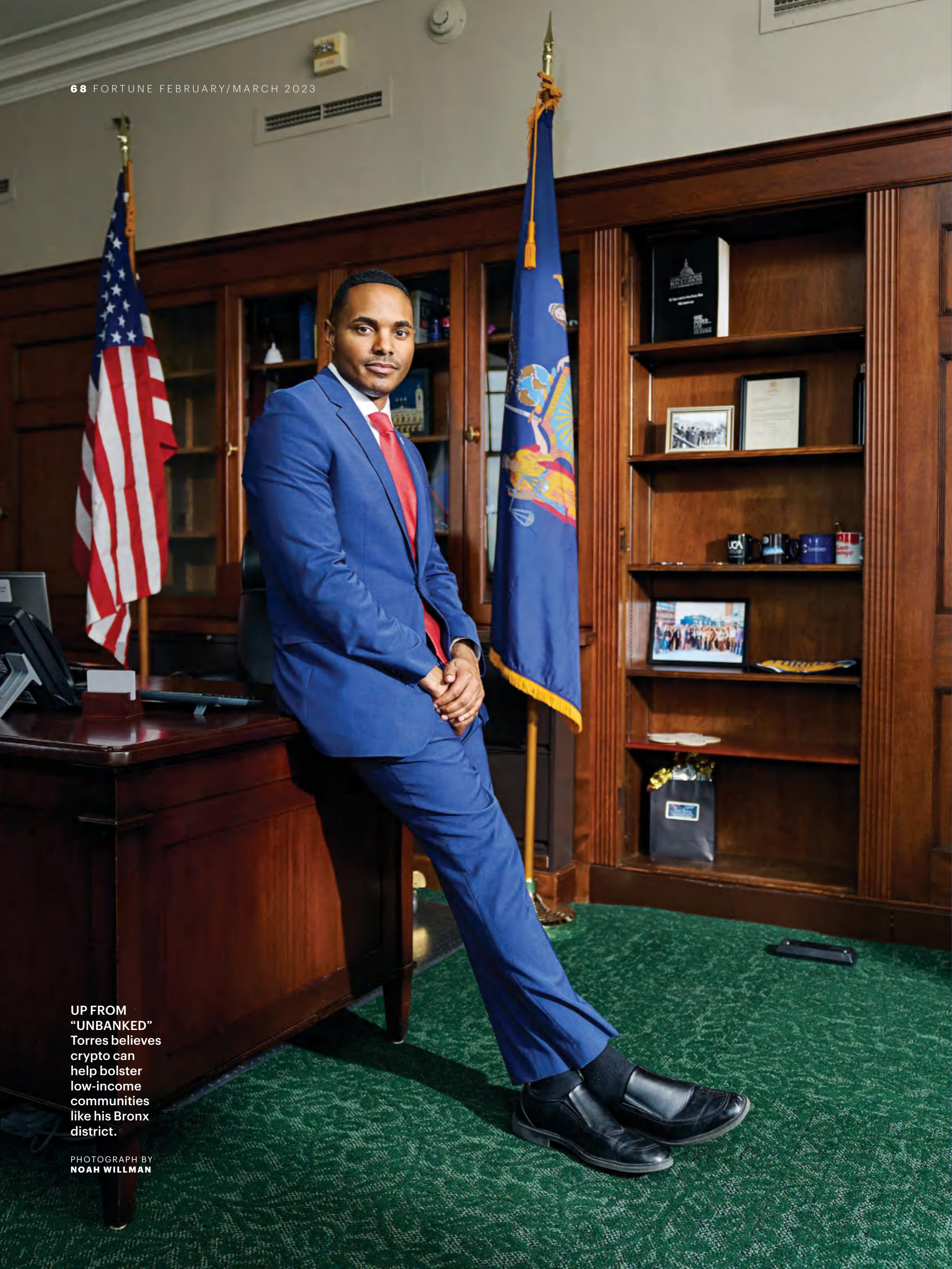
If I had a chance to revise my book, I'd say: Whatever your demographic profile, ask uncomfortable, revealing questions about yourself. What are my weak spots? What would I say about myself if I had to work with me? What am I bad at? What do I avoid in a knee-jerk way? And perhaps most important: Who picks up the slack?

Lately, I've begun to see the "non-promotable" work I've always tried to avoid as an opportunity for growth—project planning and note-taking, for example. And in doing these tasks, I have found puzzle pieces that I should have located years ago: qualities that make me a better colleague who produces better work.

I have started using my people skills—communication, collaboration, and emotional intelligence—in a different way. When I read a room now, it's less about how I think people are seeing me, but how they are seeing and understanding and influencing one another. And I've discovered unexpected talents in myself. For instance, I often find that I can sense and identify unrest, and defuse it before it escalates.

These "soft skills," traditionally associated more with women than men, are key for getting ahead in today's transformed workplace—but they don't work unless you're also doing a great job.

But the sun is setting on the age of unchecked male mediocrity, and thank goodness. It's a relief for everyone, including mediocre men. F



UP FROM "UNBANKED" Torres believes crypto can help bolster low-income communities like his Bronx district.

PHOTOGRAPH BY **NOAH WILLMAN**

CRYPTO'S NEWBIE ALLY IN CONGRESS

RITCHIE TORRES says he knew nothing about crypto when he joined the House two years ago. Now he could shape its post-FTX future.

by **LEO SCHWARTZ**

IN EARLY DECEMBER, U.S. Rep. Ritchie Torres stood at a lectern embossed with the congressional seal in his district office in the Bronx, staring with his head cocked at a line of local news cameras.

The cryptocurrency exchange FTX and its wunderkind founder Sam Bankman-Fried, a darling in Washington, had collapsed a few weeks earlier. Torres was far from Bankman-Fried's immediate orbit, but he was not free from association, either. Since being sworn in to his seat from New York's 15th Congressional District in January 2021 as a Democrat,

Torres had allied with a bipartisan group of crypto-curious politicians. Representing one of the poorest congressional districts, Torres argued for crypto's potential to help low-income people build wealth and disrupt the unjust power dynamics of finance.

Once FTX declared bankruptcy, just three days after Torres's reelection, none of those ideals mattered. Markets were in free fall, billions of dollars of customer funds were lost, and Torres had been outed as one of dozens of politicians on both sides of the aisle to receive donations from the disgraced founder, who had spent at least $40 million on such outlays. Never mind that Torres had never met one-on-one with SBF, or that the donations he'd received from crypto interests appear to have made up a tiny fraction of his war chest.

So Torres picked up the tools available to him as a U.S. congressman: He introduced legislation and called a press conference. Wearing a tight navy sweater with a starched ivory collar that shrouded him in a priestly aura, Torres addressed the assembled camera operators. "FTX was essentially a house of cards built on nothing more than Monopoly money," he said. He unveiled a bill that would require exchanges to prove and publish their assets and liabilities.

Ever the overachiever, Torres had a second bill drawn up. Before he could discuss it, someone's cell phone went off. "FTX is interrupting the press conference," he deadpanned.

For now, FTX isn't interrupting Torres's ascent. At 34 years old, he has established himself as a rising star after just a single term in Congress. Headlines focus on his pioneering demographic profile—Torres is the first openly gay Afro-Latino elected to Congress. But he stands out on policy issues too: At a time when partisan lines are etched in marble, Torres seems to relish contradiction, taking unorthodox positions for a young liberal.

Of those stances, his support of crypto may be the most divisive. The volatile, largely unregulated industry has been a dominant point of discussion in D.C. throughout its 2021 boom and subsequent bust. Legislators bickered over regulatory details, while regulators themselves largely demonstrated that they couldn't keep up. And lawmakers on both sides of the aisle came to view crypto as a dangerous distraction, with some calling for outright prohibition.

But Torres has embraced the promise of crypto and blockchains, hailing them as a conduit for financial inclusion and a tool for dispersing the concentrated power of money. He's been unusually diligent about learning the technology's ins and outs—and as a person of color from a modest background,

CRYPTO'S CAPITOL HILL CHARACTERS

While many legislators view cryptocurrency and blockchains with suspicion, the industry has won supporters on both sides of the aisle. Here are some of the figures who could help decide its future in the 118th Congress.

REP. PATRICK MCHENRY

Among the big winners of the 2022 midterm elections was Patrick McHenry. The pro-crypto lawmaker from North Carolina took over the powerful House Financial Services Committee when the GOP won a majority; stablecoin regulation is high on his agenda.

SEN. CYNTHIA LUMMIS

The Republican senator from Wyoming has been one of the biggest boosters of crypto in Congress, advocating for including Bitcoin in retirement portfolios and even changing her Twitter profile picture to include laser eyes, a meme in the crypto community.

SEN. DEBBIE STABENOW

The Michigan Democrat chairs the Senate Agriculture Committee, which has taken the lead on crypto legislation thanks to its oversight of derivatives markets. The committee was a favorite of FTX CEO Sam Bankman-Fried, passing a regulatory bill that he backed.

REP. TOM EMMER

Emmer, a Minnesota Republican, is one of Congress's most outspoken advocates for crypto, cochairing a blockchain-focused caucus and sponsoring numerous bills to advance industry-preferred regulation. His new status as House Majority Whip adds to his heft.

GARY GENSLER

As head of the Securities and Exchange Commission, Gensler is one of the main regulators for crypto. He has drawn ire for refusing to draft new rules for the sector and instead taking a hard-line approach that critics describe as "regulation by enforcement."

ROSTIN BEHNAM

The Commodity Futures Trading Commission has always been a wonkier sibling of the SEC, but chair Behnam has taken a higher-profile role through his regulation of crypto, which many industry participants view as a friendlier approach compared with Gensler's.

FROM LEFT: J. SCOTT APPLEWHITE—AP IMAGES; EVA MARIE UZCATEGUI—BLOOMBERG/GETTY IMAGES; MICHAEL BROCHSTEIN—SIPA USA/AP IMAGES; NATHAN POSNER—ANADOLU AGENCY/GETTY IMAGES; MELISSA LYTTLE—BLOOMBERG/GETTY IMAGES; MICHAEL BROCHSTEIN—SIPA USA/AP IMAGES

he diverges from the increasingly mocked and distrusted stereotype of the Crypto Bro. With crypto legislation serving as one of the 118th Congress's top priorities, the distinctive stance of the millennial lawmaker from the Bronx could chart a path for the industry's survival.

FORTUNE **MET** with Torres at his D.C. office in mid-December, where boxes were piled high in preparation for some renovations. Recalling his eventful first term, Torres admits he knew almost nothing about cryptocurrency when he first took office. "Most elected officials have heard of crypto, but very few people can even define it," he said. "I was one of those people." But by the time FTX collapsed, Torres had brought himself up to speed, and staked out a position he has called "the liberal case for cryptocurrency."

Many of his Republican colleagues see crypto as a libertarian salve to the traditional financial system, lauding cryptocurrencies' potential for privacy, autonomy, and deregulation. Some, like Wyoming Sen. Cynthia Lummis, advocate including Bitcoin in 401(k) portfolios. Torres has taken a more measured stance. He says the role of government should be creating a regulatory environment where private industry can build and investors feel safe. Rather than the "regulation by enforcement" recently pursued by the Securities and Exchange Commission, Torres advocates a model closer to New York's Department of Financial Services, where crypto companies can receive licenses through a stringent process with requirements around compliance, record keeping, and asset custody protection.

Torres says he doesn't advocate for cryptocurrencies or exchanges as an investment tool. Instead, he argues for the merits of using the underlying blockchain technology to offer faster and cheaper rails for payments, including for check cashing and remittances, which many people rely on in his immigrant-heavy home borough.

In his take on financial inclusion, he parts ways with many liberals and progressives. Organizers, researchers, and politicians on the left often see crypto in its current form as more a hazard than a help to lower-income communities, an asset class whose volatility and transaction costs make people more vulnerable, not less. And some allege that pro-crypto lawmakers—if not Torres specifically—are motivated more by financial opportunism than by ideals.

Torres pushes back against such criticism, with a rare mixture of the free-market ideals of cryptocurrency and an almost "Occupy Wall Street"–style rhetoric. "The project of radically decentralizing both the internet and the financial system strikes me as profoundly progressive, more so than people realize," he says. "There's no telling how the crypto revolution will unfold or whether it will even succeed, but I'm rooting for its success."

Torres's patient earnestness was on display at a hearing of the House Financial Services Committee, just over a week after his Bronx press conference. Bankman-Fried had been slated to appear until his arrest by Bahamian authorities the night before, so the politicians settled for John Ray III, the corporate salvage expert tasked with overseeing FTX's bankruptcy. Each congressperson was allotted five minutes to question Ray, an opportunity that many used for grandstanding. One representative from Missouri went on an extended soliloquy about how crypto should be renamed "creepy dough currency."

Congresspeople filtered in and out of the room, huddled in the corner in conversation or only entering as their turn to speak neared. Torres, a committee member, was the exception, intently following the proceedings until almost the three-hour mark, when his turn finally came. With scalpel-like precision, he questioned Ray about an obscure token that FTX had created and included on its balance sheet, whose value amounted to $2.2 billion.

"Do you agree that there's something fundamentally fraudulent about the practice of counting your own tokens as assets on your balance sheet?" Torres asked.

Ray looked impressed—well-informed questions, after all, had been rare. "It's a very risky position to use your own asset effectively as collateral," he replied.

That Torres had done his homework would not come as a surprise to those who know him. His work ethic has won Torres respect from across the aisle—as it has throughout a political career that started in his teens.

He grew up in the East Bronx, raised with two siblings by a single mother making minimum wage, in a public-housing project across the street from a vacant 222-acre plot that became the Trump Golf Links. Torres attended Lehman High School, one of the largest public schools in the city, and participated in moot court. He had to develop appellate-style arguments and present them to judges, often sculpting positions that he disagreed with; Torres says it was the single most formative intellectual experience of his life.

Torres attended New York Univer-

"The project of radically decentralizing both the internet and the financial system strikes me as **PROFOUNDLY PROGRESSIVE,** more so than people realize."

REP. RITCHIE TORRES (D-N.Y.)

"ANYTHING IS POSSIBLE IN THIS HOUSE RIGHT NOW. There is a lot of room for somebody who has spent time getting educated about crypto to have a lot of influence."

SHEILA WARREN — CEO, CRYPTO COUNCIL FOR INNOVATION

sity but, dealing with severe depression, dropped out his sophomore year. Having campaigned for a local politician's New York City Council campaign while in high school, he took a part-time job in his office, eventually working seven days a week on housing issues. Torres decided to run for an open council seat in 2013. He survived a crowded primary field and won 91.4% of the vote in the general election, becoming the youngest serving council member, at 25 years old.

Rafael Espinal, now the executive director of Freelancers Union, was elected to City Council in the same year as Torres, at 29. Espinal recalled getting brunch early in their term together at a pizzeria in Bushwick, Brooklyn, where he was struck with Torres's mastery of language. It soon became apparent how dedicated Torres was to his job rather than his social life: When Espinal suggested they order a round of mimosas, Torres had never even heard of the drink.

Espinal's parents were from the Dominican Republic, and Torres's father was from Puerto Rico. Both grew up in low-income homes, and each spent most of their lives "unbanked"; indeed, households in the Bronx are twice as likely to be unbanked as in the rest of New York City. Espinal didn't have a bank account until he was 20, instead relying on expensive check-cashing businesses, which can charge as much as 10% of the value of the check in fees. "If you grew up in these communities, you quickly learn it's expensive to be poor," Espinal says.

The two lawmakers soon collaborated on progressive issues, including a successful push to ban cashless businesses, which Torres argued disadvantaged poor communities of color. Torres chaired the council's Committee on Public Housing. And the two were among the few council members to endorse Bernie Sanders for president in 2016.

Still, Torres often differed with the left on policy issues, arguing that the ethos of the Democratic Socialists of America did not always mirror his constituents. He often referred to his district as the "Bible Belt of New York City"—more likely than the AOC set to be socially conservative, a persistent campaign hurdle for the openly gay Torres. Once in office, he took what he described as "pragmatic progressive" stances. During one pivotal episode in 2017, Torres struck a backroom deal on a police reform bill, agreeing to a watered-down stipulation about when officers have to provide identification during stops—an act that many of his onetime allies took as a betrayal, but that Torres defended as a compromise.

The incident soured Torres's reputation among those who would normally be allies on financial inclusion. Michael Kink, executive director of the New York–based labor coalition Strong Economy for All, described Torres as "more of a conventional politician than any kind of left-wing firebrand." It also helped fuel challengers on his left in the 2020 Democratic primary, though Torres won handily.

But Espinal describes the distinction as a badge of honor, calling Torres a free thinker. "It's drawn from his experience and history of growing up in the Bronx," Espinal says. "This outcast mentality that we bring with us creates true independence."

TORRES WAS ASSIGNED to the formidable House Financial Services Committee just as cryptocurrencies' bull run was kicking into high gear, and just as crypto executives began ramping up their pitches and donations in Washington. In December 2021 the committee held its first hearing on crypto, inviting executives including Bankman-Fried and Circle CEO Jeremy Allaire. Torres, hitherto a newbie, threw himself into intensive study, reading as many articles as he could and even watching a video-recorded blockchain course taught at MIT by Gary Gensler, now the chair of the SEC and widely viewed as a crypto nemesis.

He says he came out on the other side with a new perspective, believing blockchain technology could help solve problems that disproportionately affect low-income communities of color like those in his district. Torres began meeting with industry leaders, including Chris Dixon, an influential partner at venture firm Andreessen Horowitz, who was an early advocate for Bitcoin. Torres describes Dixon as an illuminating "philosopher and practitioner" in the crypto space. Dixon declined to be interviewed, but in an emailed statement he praised Torres as a "pragmatic policymaker who understands that achieving Web3's potential requires clear regulatory guidelines."

Dixon and Andreessen Horowitz are proponents of a "decentralized internet" that uses blockchain technology to spread ownership for everything from art to games to technical infrastructure like Wi-Fi networks. The approach has come under fire, with critics pointing out that the massive venture firm's large stakes in such projects make them anything but "decentralized." But Torres sees potential in the Web3 vision. With less of their wealth claimed by corporate

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middlemen, he explains, "it would mean that workers and creators get to keep a greater share of their income."

The view resonates with many of Torres's constituents. So does the idea that speculating on cryptocurrencies could boost their wealth—a view Torres himself says he's skeptical of.

Julio Barrios and Andrew Richards, surgical technicians at the Montefiore Medical Center, say they began to dabble in crypto investment even as their wealthier, mostly white colleagues stuck with traditional stocks like Apple and Amazon. During crypto's bull run, the two men say, those colleagues began to turn to them for recommendations. "I'm giving advice to doctors who went to Harvard," Barrios says, laughing.

Barrios and Richards created the community group Bronx Crypto to teach the basics of crypto investing, for $25 a month, to anyone who signs up for their Discord server. It's a group whose members are mostly people of color. Of his Bronx neighbors, Barrios says, "We've been able to remix every single song, we've been able to create new dances, but we have not been able to teach our people how to grow generational wealth."

When Torres announced his two crypto bills in December 2022, Barrios and Richards were by his side. Torres held them up as examples of the investors he wanted to protect. Barrios and Richards had about $5,000 locked up in FTX when it filed for bankruptcy, although they say they have overall still seen gains in their risky crypto bets over the long run.

THE SHEER VOLATILITY of crypto has driven away many on the left—with some arguing that such instability does the most damage to those who can afford it least.

A recent study from the University of Chicago showed that 44% of Americans who own and trade crypto are people of color, a figure far higher than the number for traditional stock ownership. That means that tumbles in crypto prices can exacerbate the wealth divide even further, says Michele Gilliam, deputy political director of the nonprofit Action Center on Race and the Economy. Gilliam acknowledges that many elements of the traditional financial system are deeply flawed and racist, but adds that "the answer isn't to move into a system that is even worse." She compares the recent collapse of the crypto market to the subprime mortgage crisis, where Black and Latino homeowners were far more likely than white borrowers to lose their houses.

Outside of the realm of speculation, crypto hasn't yet proved itself as a tool of financial inclusion. Research from the Brookings Institution found that even in use cases like remittance payments, the transaction costs and price volatility of crypto options outweigh the benefits, even compared with existing, often-predatory alternatives.

What crypto does have is leaders and lobbyists who are adept at making their case to legislators—and who have lately been eager to back sympathetic ones financially. Torres denies that donations motivate his interest, but he has experienced some of the largesse. His 2022 campaign received a $2,900 donation from Sam Bankman-Fried, and Bankman-Fried's brother, Gabriel, donated over $30,000 to his campaign and related political action committees. Torres also received nearly $12,000 in donations from individuals associated with Andreessen Horowitz, which hosted a fundraiser for him at the glitzy Zero Bond club in Manhattan's NoHo district.

Torres says his team is setting aside any donations associated with Bankman-Fried, in the event that they're clawed back during FTX's bankruptcy. At the moment, that seems like a manageable sacrifice. Torres's overall campaign fundraising topped $4 million in the 2022 cycle, and after facing only token opposition, he has most of that cash on hand. Many of his biggest donors have been pro-Israel groups, private equity, and hedge funds—further sources of consternation among his progressive critics.

ON A CHILLY Friday evening in January, Torres met with Fortune again at an Italian restaurant a few blocks off the main strip of the Bronx's Little Italy. The meeting was delayed by the historically protracted vote for the House speaker, with Kevin McCarthy finally winning on his 15th ballot.

Amid the dysfunction, Torres still planned to push his crypto agenda, including reintroducing the two bills he had drafted in the wake of FTX's collapse. Over a plate of chicken Parmesan (hold the pasta, hold the vegetables), Torres brushed off the notion that he was expressing any kind of controversial viewpoint by promoting blockchain technology.

"I admit that I'm a heterodox Democrat," Torres says. "I won my race without the support of the Democratic establishment and without the support of the progressive movement." In his quest for a saner system, Torres has taken some big swings against that establishment. In December, he called on the Government Accountability Office to investigate the SEC's failure to protect the public from FTX. For a second-term congressman to lambaste an appointee of a president from his own party raises eyebrows in conventional circles, but Torres views it as common sense. And given the current upended power dynamics in Congress, where first-year GOP representatives almost torpedoed McCarthy's speaker bid, the environment could be ripe for Torres.

"On some level, anything is possible in this House right now," says Sheila Warren, CEO of the Crypto Council for Innovation, a trade group in Washington. "There is a lot of room for somebody who has actually spent time getting educated about this topic to have a lot of influence."

And as for critics who complain that it's fishy for a legislator to be pro-crypto? "If there are people who have issues with me, that's their problem, not mine," Torres says. "I'm from the Bronx. I just don't give a shit."