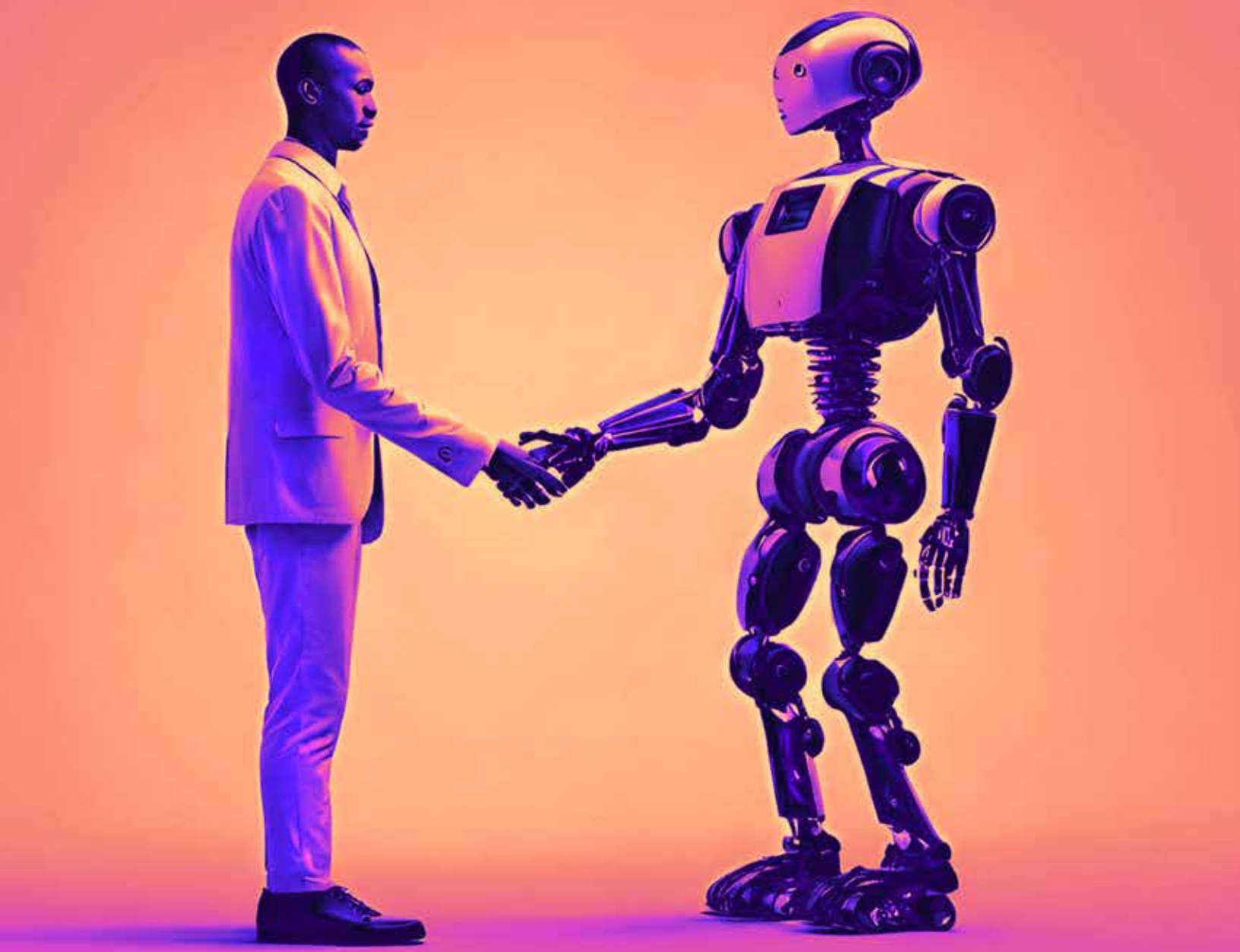
SPRING | SUMMER 2025

OKLAHOMA HUMANITIES

CULTURE | ISSUES | IDEAS



TECH

CAROLINE LOWERY
Executive Director
caroline@okhumanities.org

PERSPECTIVE
FROM THE EXECUTIVE DIRECTOR

As we welcome the vibrant seasons of spring and summer, Oklahoma Humanities is steadfast in our mission to foster a vibrant, humanities-rich environment for all Oklahomans. Our programs continue to foster dialogue, reflection, and understanding across our great state.

Celebrating its 40th anniversary of connecting communities, our flagship initiative *Let's Talk About It* remains a vital public program. Since 1985, this dynamic book club has invited participants to delve into literature through engaging discussions guided by facilitators and scholars who provide fresh analyses. Themes range from Oklahoma history to ethnic diversity and offer new perspectives and insights. Free and open to all, these sessions annually serve 3,500 readers and reflect our commitment to making humanities programming accessible.

We are also proud to partner with the Smithsonian Institution on the *Museum on Main Street* program that brings traveling exhibitions to small, rural communities, focusing on broad topics in American history and culture. These exhibitions provide host sites the opportunity to engage local audiences with rich, educational content. "Voices and Votes: Democracy in America" recently concluded its tour through the state after stopping at six sites. We now await the arrival of the next exhibit, "Spark! Places of Innovation" in 2027. Could your community be one of the next host sites? Be on the lookout later this year for details.

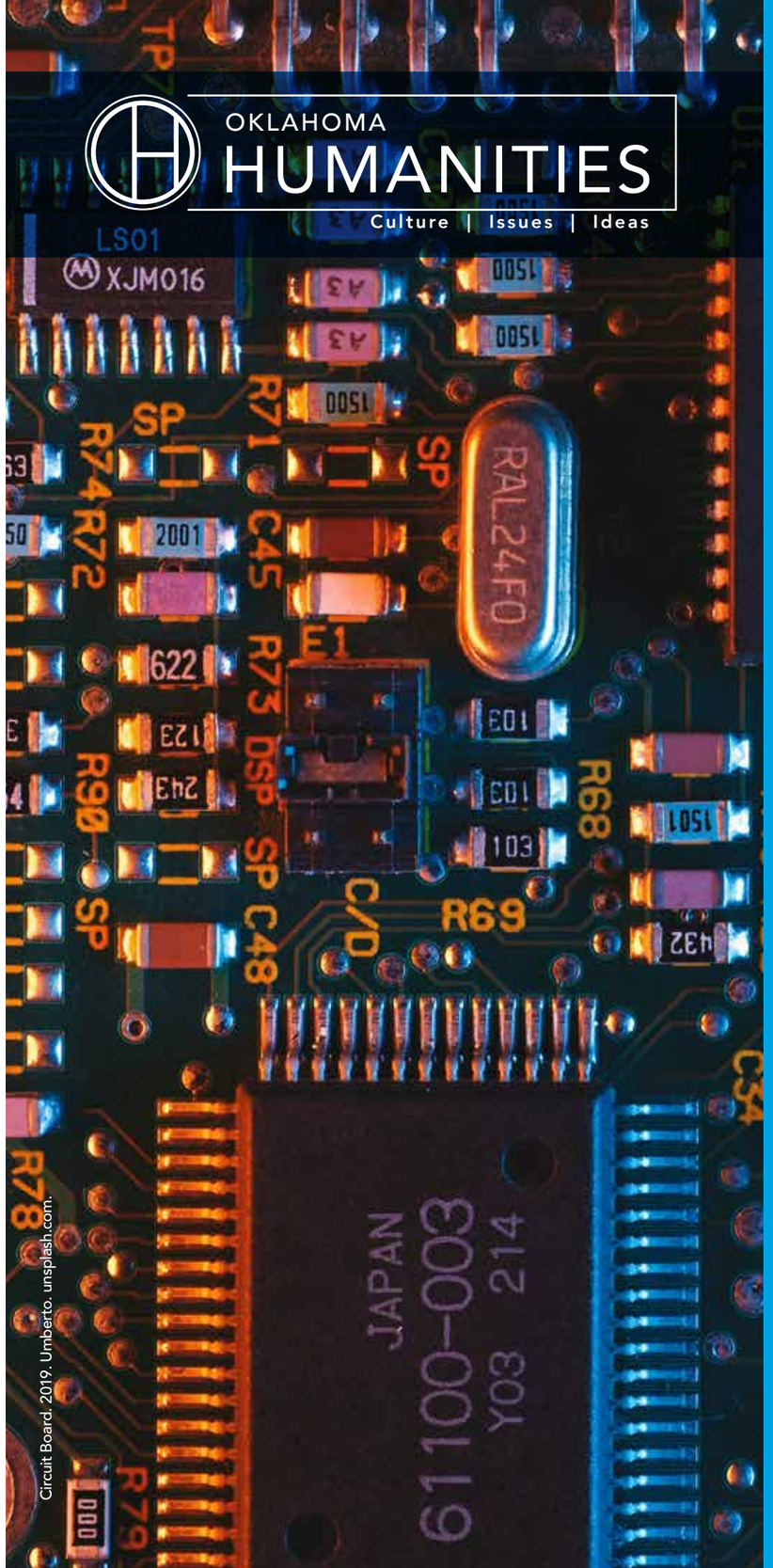
Known statewide, *Oklahoma Humanities* magazine continues to deliver the humanities directly to you—our readers. Through insightful essays, cultural explorations, and thought-provoking discussions, the magazine connects readers across the state with ideas rooted in history, literature, philosophy, and more. Each issue provides a platform for meaningful storytelling and reflection.

Finally, our grant program continues to support local organizations in delivering humanities-based projects in one of three categories: Public Humanities, Preservation and Access, and Education. These grants empower communities to explore their heritage, share diverse stories, and promote lifelong learning. The upcoming fall funding round will undoubtedly bring the humanities to life across the state.

Looking ahead, we are excited to continue our partnerships and provide these programs to all 77 counties. By collaborating with local organizations, libraries, and educational institutions, we aim to ensure that every community can engage with the humanities.

We invite you to join us in these endeavors—recommend *Oklahoma Humanities* magazine to a friend or send us your feedback on the latest issue, participate in a book discussion, visit a traveling exhibit, apply for a grant to bring humanities programming to your neighborhood, or support our work with a donation.

Together, let's continue to explore the human experience, celebrate our shared history, and inspire our collective future.



Circuit Board. 2019. Umberto. unsplash.com.

OKLAHOMA HUMANITIES
Culture | Issues | Ideas

CONTENTS

TECH

SPRING | SUMMER 2025 | VOL. 18, NO. 1

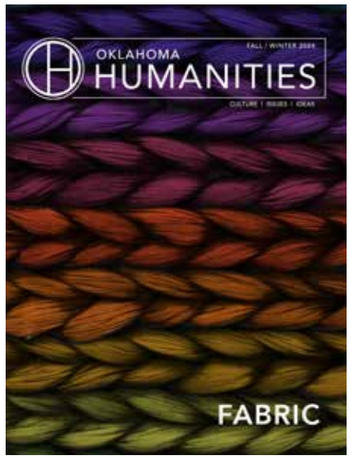
ON THE COVER: AI meeting man. AI-generated image. canva.com.

POST MAIL & MESSAGES

YOUR FEEDBACK SHAPES THE STORIES WE TELL

We love hearing from our readers! Please consider taking a moment and sharing your feedback with us. Not only does it influence future content, but it's critical in demonstrating the impact and effect of the magazine in our federal reporting. Email comments directly to the editor at kimberly@okhumanities.org. Visit bit.ly/3Fjssu9 or scan the QR code below to complete a short survey.

Shape the stories we tell and help us illustrate our impact with your feedback today!



FROM OUR FABRIC AUTHORS

It [*Oklahoma Humanities* magazine] is always an informative magazine and a pleasure to read, filled with exceptional photographs and articles. Thank you for including my work in this latest publication. I am delighted.
—Terri Cummings

The magazine is fabulous! You have put together a diverse and interesting mix of writings. I'm proud to be a part.
—Vivian Nida

FROM OUR READERS

I absolutely loved the Fall/Winter issue of the magazine, especially the article on Wilma McDaniel. I'd never heard of her before and was completely blown away by her poetry. She kind of reminds me of the photographer Vivian Maier, who was also mostly unknown in her lifetime. —Robert Williams

I have so enjoyed reading and then re-reading Vivian Nida's poetry from the FABRIC issue. I particularly love stanza VIII, with her description of all of the types of cotton recognized by touch by her Mama. It dawns on me that this is probably why I now love so many kinds of textures. My mom and I also spent time browsing fabric stores with our fingers gliding over many bolts of varying textures. Thank you for sharing her wonderful gift of imagery through words. —Sharon Varnum

2025
Editor's Circle

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THE 2025 EDITOR'S CIRCLE

Donors who designate gifts of $500 or more for *Oklahoma Humanities* magazine are printed in the Editor's Circle. Thanks to these generous donors, we distribute this award-winning publication free of charge to Oklahomans in all 77 counties. Thank you–we're grateful for your generosity!

OKLAHOMA HUMANITIES
Culture | Issues | Ideas

Oklahoma Humanities magazine is an award-winning collection of cultures, issues, and ideas—a rich mix of humanities scholarship, insightful narratives, informed opinions, and beautiful images, for a read that is smart, balanced, educational, and entertaining. Published twice a year, it reaches Oklahomans in all 77 counties and is free of advocacy and advertising, supported by donors like you.

Subscriptions are free. To join our mailing list, visit us online at okhumanities.org or call (405) 235-0280.

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SIDENOTE

KIMBERLY ROBLIN
kimberly@okhumanities.org

Technology. The Digital Artist. pixabay.com.

Dr. Glenn T. Seaborg was running late on March 4, 1965. At 10:00, the Senate Special Subcommittee on Arts and Humanities noted the absence of their first scheduled witness and continued with the proceedings. Seaborg was one of several individuals testifying that day in support of establishing a National Foundation on the Arts and Humanities at a time when science dominated American initiative. He joined an orchestra director, a speech and theater professor, a cultural affairs officer, the president of the Modern Language Association of America, a museum director, a library director, and others.

His testimony was worth the wait. As Chairman of the U.S. Atomic Energy Commission and 1951 Nobel Prize winner for chemistry, Dr. Seaborg made a compelling and perhaps unexpected case not only for the necessity of the humanities, but their inherent similarity with science and technology:

> It may seem unusual to some of you to have a scientist testify on behalf of a bill advocating the creation of a National Humanities Foundation. In my own case, it might seem doubly unusual since, as you probably know, I have always been a strong advocate of those measures which would stimulate a greater interest in science and turn more young people toward a scientific career. However, I do not find the two positions incompatible. In fact, as my testimony will indicate, I believe that in a democracy it is essential that science and the humanities be firmly united in a creative partnership….
>
> I do not believe that the humanities and sciences should be separated, or as a matter of fact, are as widely separated as most people think. After all, science does not exist apart from man. It is a human endeavor. To a great extent it is what makes us human…. And it is the same human curiosity which makes us examine ourselves and our past ….
>
> We cannot afford to drift physically, morally, or esthetically in a world in which the current moves so rapidly perhaps toward an abyss. Science and technology are providing us with the means to travel swiftly. But what course do we take? This is the question that no computer can answer.

Six months later, Congress passed the bill to establish a National Endowment for the Humanities (NEH) and National Endowment for the Arts (NEA). As the state affiliate of the NEH, our council's history is innately tied to this moment when the country reaffirmed its commitment to the arts and humanities.

In this issue, we're returning to those roots and exploring the intersection of two fields born of mankind's reflexive curiosity—technology and the humanities. We'll trace the algorithms and x-rays making Herculaneum scrolls legible after nearly 2,000 years; the competing anxiety and acceptance surrounding AI and its applications in the cultural and creative world; how Greenwood Rising invites visitors into the past through holography; the bionic potential of treating rheumatoid arthritis; and the popularity and possibilities of genetic genealogy.

We'll see how ethics, history, and philosophy can inform and elevate the discussions and development of technology, just as technology can inform and elevate the humanities. As Dr. Seaborg testified, the two are ultimately not incompatible. They are instead, he described, "essential partners in human progress."

TAKING STOCK

AI Art and Authorship

Unrealized gains and losses

BY JEFF PROVINE

Whether algorithm-driven advertisements online or robot-voiced assistants telling us it's time to change the oil, AI is just about everywhere. It dominates tech conversations as some analysts foretell a luxurious future with machines humming along to do all our tasks while others warn of displaced and jobless humans wandering a cyber landscape with no purpose. With the expansion of AI and its applications, could we ultimately hand over one of our most defining traits as a species, our creativity, to a databank?

Laptop. 2020. Martin Katler. unsplash.com.

Mechanical loom. Memory Catcher. pixabay.com.

Typewriter. 2022. Johnny Briggs. unsplash.com.

THE RATCHET EFFECT

AI is the latest in the long journey of human tools. Thanks to our enormous brains and effective grasping hands, we have woven stalks, mastered fire, sculpted stone, forged metal, and even driven electrons to turn on the lights with a flick of a switch. Humans invent, adapt, and advance again, ratcheting up what we are able to accomplish. The ratchet itself is a mechanical marvel as a device that freely allows force in one direction while preventing movement in the other. Problems arise, however, when we ratchet things up only to reveal we may have been going in a wrong direction. For good reason, change can make people nervous, and technology causes some of the most widespread concerns of all, whether it be steam engines exploding, telephone lines attracting lightning, or self-driving cars not knowing when to stop. Even written language supposedly rattled some nerves in the ancient world, according to legend.

Twenty-four centuries ago, Plato wrote that his teacher, Socrates, related a story to Phaedrus that was already considered old back then. According to Socrates, the god Thoth, "inventor of many arts, such as arithmetic and calculation and geometry and astronomy and draughts and dice," approached Pharaoh Thamus with his latest invention: written language. No longer would words have to be verbally delivered from person to person; they could be recorded, transported, even reread years later. Thoth assured Thamus it would make Egyptians wiser and allow them to always remember what could otherwise easily be lost.

Thamus was unconvinced. He replied, one might imagine sadly, that writing would not be all Thoth hoped:

> . . . for this discovery of yours will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves . . . you give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing; they will appear to be omniscient and will generally know nothing; they will be tiresome company, having the show of wisdom without the reality.

While the story of Thamus and Thoth is more myth than truth, it highlights the very real pattern of technology inducing anxiety throughout history. The nickname we use for those who fear technology—luddites—sprang from a famous example. Before automation, factories were mostly where people gathered to ply their specialized trade and share resources. When production increased beyond cottage industries, machines arose that could mimic that complicated human work. As mechanized looms, spinners, and stocking frames threatened to decimate the demand for those skilled workers, some of those workers revolted. Organized into bands, they called themselves "Luddites" and smashed the machines in riots that prompted a crackdown by the British government.

Decades later, more advanced technology like the telephone set people on edge. Many had immediate apprehensions, fears of electrical shock or that private conversations might be leaked, but others fretted that the art of letter-writing might slip away when anyone could simply call up a friend or relative to catch up with a chat. Famed letter-writer Mark Twain had choice words for the telephone, calling it "a time-saving, profanity-breeding, useful invention" in his "Letters to Satan." To this day we have concerns about robocalls and the convenience of texting over calling. Letter-writing has indeed become a rare event, even though it's much easier than in the early days of telephones thanks to another technological advancement: the ballpoint pen.

When the pen became widely available in the mid-twentieth century, writers could more quickly and easily make notes. Gone were the days of dipping a quill or refilling a fountain pen and waiting carefully after writing for the ink to dry lest a smear ruin an entire page's work. Yet there was trepidation about instilling a whole generation with reckless extravagance. Would students simply use up the ink and toss the entire pen instead of refilling the reservoir? Others worried the slippery-tipped ballpoints would diminish students' penmanship. Typewriters and keyboards exacerbated this anxiety and today many schools have even removed cursive from the curriculum entirely.

As computers have become smarter, they have offered us more, but we may be losing skills in the trade. By the 1990s, word processors utilized spellcheck, an early form of AI that was simple enough on the computer's side: compare a string of letters against a dictionary of words and make suggestions if something didn't match. Of course, there were problems with misspellings like "there" and "their," so the next logical step became including grammar check. Soon computers could test for sentence structure and give recommendations on voice and even commas. Skeptics noted the computers could make mistakes. Cynics imagined people would become reliant on whatever the computer said and let their grammar skills atrophy. They were right. Our own anecdotal evidence can think of any number of times we haven't been sure about a semicolon or when to stop a run-on sentence.

Fountain pens. Djedj. pixabay.com.

Circuit board. 2019. Umberto. unsplash.com.






AI-generated images using the prompt, "fiddler dancing on a roof."

Top row: Adobe. Clockwise above and right: Canva. Bottom row and left: Adobe Stock Images. February 3, 2025.



Just as the qualms about English skills proved true, so have many of the others. Ballpoint pens and, especially, typing have impacted handwriting. A recent Norwegian study revealed why this reliance on typing is potentially problematic. When they mapped the brain activity of students typing or writing with a pen, they saw that the latter had much more activity in the regions of the brain that encode memory. It vindicates those who feel they remember better when taking notes by hand and gives support for handwriting curriculum.

GENERATING VS. CREATING

Now the next technological horizon is already running under our feet with generative AI. "AI" isn't actually "artificial intelligence." These unthinking programs have consumed enormous amounts of information, whether visual or textual, and built statistical models based on prompts that only look intelligent. Asking a computer to produce a picture of "a fiddler dancing on a roof" drives its programming to seek out similarly-labeled images, identifying patterns and overall structures to assemble an image. More algorithms then fill in the body and backgrounds, which can often lead to interesting hiccups. The fiddler might have three legs and the rooftops behind him might be disjointed or flow into one another. Still, what it can produce is fast, often interesting, and improving rapidly.

The same goes for generative text AI. When a prompt asks a large-language model (LLM) about the best gift for a friend who just got a cat, it may compose a response like, "Congratulations to your friend on their new cat! Here are some thoughtful gift ideas," along with a list of toys, carriers, and furniture. The machine isn't actually reasoning out cat gifts or even capable of wishing the friend joy. It is pulling from its memory banks to give a response that, statistically, looks like what a piece of human writing would look like.

As a college English professor, I've already seen quite a few attempts in the classroom to replace human writing with computer-generated text. Students in a rush may copy-and-paste the directions for a discussion assignment directly into their favorite LLM, like ChatGPT, wait a few seconds for it to print out a message, and then copy-and-paste it right back into the homework response. The voice is stilted and the analysis surface-level, making it as obvious as previous generations of students who copied directly from encyclopedias. But, the AI is getting better every day. Unknowing teachers have likely already given an A+ to many assignments completed by a computer. This has led students and instructors alike to wonder, if ChatGPT can give a pretty good review summarizing and suggesting feedback on a fellow student's paper draft, why should we bother taking the time to do it ourselves?

This debate is nothing new. "Why learn times tables when I can just type it into the calculator?" many of us asked as fourth graders. The answer, of course, is to know when the answer doesn't look right. Maybe you mistyped, or maybe the calculator is set into the wrong mode. Similarly, we need our students in an English class to know how to analyze a piece of writing to know what might make it better.

Is this increasing use of AI-generated text and imagery a misstep? Are we ratcheting in the wrong direction? Already freelance writers and artists have seen their gigs drop off as people who formerly needed a quick article or picture now turn to a cheaper, faster computer. Someday, they fear, we might see entire feature films generated completely by machines. If you think Hollywood is just recycling old ideas for movies, just think of how much worse

Mind Your Step. 2019. Pawan Kawan. unsplash.com.

it can get literally recycling old ideas! Writers are already taking action to defend their work. The Writers Guild of America made it a key matter of their strike in 2023 and the Authors Guild, along with seventeen authors including George Saunders and John Grisham, sued OpenAI for unpermitted use of their copyrighted work in programming the algorithms. Even if a computer could emulate their style, people wouldn't want it. We want to read work from the soul.

Beyond the aspects of capturing a human voice, AI would still need a lot of help. AI doesn't create. It only generates statistical models based on prompts. One thing it will always need is human ideation, someone to say, "Hey, what about this?" AI has no needs, and it does nothing unless we tell it what we imagine we want it to do. Moving forward, individual projects will determine if AI or artists are needed.

Anyone who wants a portrait of themselves painted like Napoleon atop a horse could easily submit a photo and get just that. Anyone wanting a good or specifically styled portrait will need to approach someone who has the skillset to know what goes into creating that refined artwork. The same will go for anyone wanting a custom-written novel, comic book, or even film. Our future will require far more critical thinking and editing to know what makes the best possible piece.

Those seeking to be creative professionally, who have always needed benefactors and patrons no matter the era, will continue to need the same in an AI-powered future. Audiences will decide when they want to consume mass-generated art and when they want something created by a human hand, and the lines between the two will blur. There may even be more demand for creatives as companies strive to have great content rise above the noise of computer-produced mediocrity. The tools may look very different a few decades down the road, but we will always need humans for our writing and art.

New technology means a new way of life, for better and for worse. The automatic loom put thousands of weavers out of work at the turn of the nineteenth century, but now some have closets so packed with clothes that it would be an embarrassment of wealth a few generations ago. Spellcheck may have put a ding in our spelling, and pens and keyboards may have caused our handwriting to struggle, but people are reading and writing more today than ever before. We don't know what advancements await us, maybe instant teleportation where we lose sight of the importance of the journey along the way or telepathic 3D printers that produce whatever we picture in our minds without needing to mold or build it with our hands. Whatever comes, these advancements will not change the human desire to create, only the ways in which we can do it. What we must always remember is Thamus's warning to be on guard against "having the show of wisdom without the reality."

JEFF PROVINE is a professor of English at Oklahoma City Community College, where he also teaches humanities courses such as "History of Comic Books." In addition to his teaching, he studies local folklore, leads haunted history tours, and has published several collections including *Haunted Oklahoma* and *Campus Ghosts of Norman*. Jeff also writes speculative fiction and comic strips. Together with other creators, he co-founded the Oklahoma Comic Arts Foundation to promote visual narrative in the state.

Robot in Seoul, South Korea. 2021. Andrea de Santis. unsplash.com.

Greenwood Rising

Immersion and Interpellation

Holograms humanizing history

BY THOMAS CONNER

The room looks like an old barbershop. A long mirror stretches across the far wall, with three barber's chairs in front of it. Towels, scissors, and other items are strewn about, but they're just set dressing. Tulsa's Greenwood Rising is less about staring at artifacts and more about historical immersion. A trio of holograms appears in the mirror and invites visitors, often just passive onlookers, to become active participants in their world of 1921. Inert objects can only say so much, but the animated ghosts of Greenwood Avenue have much to say.

Barbers from T.C.'s Barber Shop. Courtesy Greenwood Rising, Inc. Tulsa, Oklahoma.

TRENDING

This digital experience represents a current trend among museums who are increasingly focused on creating immersive experiences rather than the traditional method of displaying artworks and objects. This is driven by several factors, namely advances in digital technologies, from touch screens and interactive video to virtual-reality (VR) and augmented-reality (AR) displays. At the Getty Center in Los Angeles, for example, visitors join interactive digital tours and are surrounded by 360-degree videos. The Cooper Hewitt, Smithsonian Design Museum in New York featured an "immersion room" with projections of historical wallpaper designs. And at Greenwood Rising, visitors mostly wander through "environmental media" and underneath massive digital displays that are projection-mapped onto striking shapes. The entire 11,000-square-foot space is designed as a walk through history rather than among its remnants. A museum visitor in the twenty-first century is meant to move and be moved, not just stand and stare.

When the Greenwood Rising museum was proposed, its organizers faced a very contemporary challenge. Like the 9/11 Memorial Museum or Oklahoma City's National Memorial and Museum, the unique building erected at the center of Tulsa's Greenwood Avenue neighborhood in 2021 was envisioned more as a memorial to a tragic event than as a storehouse of historical artifacts. One of several concepts generated by the Tulsa Race Massacre Centennial Commission, Greenwood Rising was charged with the Commission's "core purpose of truth-telling." This mission foregrounded the presentation of a Black culture wounded by racial violence, and organizers aimed to make visible the more ineffable participation of people, past and present, within social discourses about race and everyday life in a diverse American city. The museum's four primary galleries embody not only the flashpoint of the Massacre, but narratives of economic and cultural expansion leading up to, and after it. As the museum's inaugural, interim director, Phil Armstrong, explained:

> People, all kinds of people, needed to leave this place not so much intrigued by stuff that was left behind as thinking about what they *felt* about what they saw—and what they could do about it *now*.

Social and cognitive sciences support the idea that multisensory, participatory interactions make exhibits more engaging and accessible to broader audiences. People not only remember things they *experience* more than things they *see*, they remember them more deeply. But remembering information is useless unless it produces subsequent social application and action—changes of mind, driving to the polls, off-the-couch participation in social movements.

Research into how this specific kind of encounter translates into social action is just beginning. In *Museums, Narratives, and Critical Histories*, published last year, M. Elizabeth Weiser specifically claimed that Greenwood Rising's plugged-in presentations succeed by "implicat[ing] the individual visitor in restitution by asking how they will change their *actions*." Findings in a forthcoming study conducted by Chaya Crowder at Loyola Marymount University and Elsa Voytas at Dartmouth show that Greenwood Rising deepens visitors' existing attitudes about racial justice and significantly increases

"Ghosts of the Library," 2005. Abraham Lincoln Presidential Library and Museum. flickr.com.

Greenwood Rising barber shop, June 2, 2024. Robert Stinnett. flickr.com.

the desire to participate by donating to the museum. Other elements of the space, they find, "are particularly effective in shifting racial justice outcomes among a broader population outside the immediate context of the museum." That was the goal of Armstrong and his original team:

> If we can get people to hear this story, they'll be captivated for the rest of their lives. It's about people leaving and thinking, 'How do I become part of the solution? How do I change how I interact with people …? How do I be part of what moves this community forward?' And that starts with capturing their hearts and demonstrating how rich and wealthy and vibrant and incredible this culture was. So it starts in the barbershop.

TIME FOR A TRIM

Immediately after watching an orientation video in the lobby, Greenwood Rising visitors enter the barbershop. The scene, titled "The Heart of Life," is labeled by a small plaque that frames its purpose: "The Black barbershop is a place where residents and new folks come together and discuss local events . . . . Getting a haircut was a social experience that built community spirit."

The exhibit itself is designed to do exactly that: bring together folks—across time and even corporeality—to build a visceral sense of community. A bell above the door jingles as visitors walk in, and the mirror is the first thing they see. In it are the apparent reflections of three Black barbers, one of whom beckons, inviting them in. But the barbers aren't in the room. They're only visible in the mirror—because the mirror is also a screen. The barbers are digital "holograms."

Optical holography was invented in the 1940s as a way to display 3D images, but the technique quickly devolved into the shimmery, kitsch objects most of us of a certain age remember. Then *Star Wars* happened ("Help me, Obi-Wan Kenobi . . ."), followed by a new *Star Trek* TV series (the "holodeck"), and suddenly "holograms" were a household term. But these new holograms are different: digital projections rather than optical images. By the twenty-first century, real-world designers began realizing or at least simulating these imaginaries, resulting in staged resurrections by holograms of Tupac Shakur, Michael Jackson, and Buddy Holly. With a digital projector and some old-fashioned tricks, it's now fairly easy to display a full-size animation of an individual that, to a great degree, looks and feels like they're in the room.

Greenwood Rising's barbers are just such digital trickery—and they are truly an experience. Once visitors enter the shop, the barbers start chatting. As they mime the actions of cutting hair, they talk about events of the day (in 1921) and gossip about people around the Greenwood neighborhood. Eventually, they debate issues and ideas at the core of Black identity from their historical situation. This is not, however, a conversation intended to be watched and listened to passively. The "customers" are included in the klatch. The barbers are just actors in an eight-minute film, but they're good,

engaging actors, and they very purposely break the fourth wall. They look at the visitors and include them in the exchange. More importantly, they invite them to sit in one of those barber's chairs—because when they do, the barbers appear to be cutting *their* hair.

This scene (and each digital exhibit at Greenwood Rising) is the product of designers at Local Projects, a New York City-based leader in producing museum experiences. In the early days of conceiving Greenwood Rising, members of the Tulsa commission visited the Legacy Museum in Montgomery, Alabama, where Local Projects had designed an exhibit showing striking holograms of enslaved people. Hannibal B. Johnson, a Tulsa attorney who chaired the Commission's education committee and helped write the script for the barbershop scene, rhapsodized about the impact of that trip:

> It was so engaging…the idea that you had a sense of being in conversation with what seemed to be like other people, almost as though the holograms had become real people. Your role is as a listener, but the holograms are lifelike and they're moving and speaking—they're in the room *with you*…. We decided almost immediately that we wanted something like that to be a part of whatever this museum would become. It's such a unique way of imparting substantive information without being purely didactic.

The barbershop's merging of space and time is often slow going, though. Most visitors hang in the back of the room, trained by decades of media saturation to stand still and simply stare at any flickering screen. Occasionally, though, a brave soul steps forward and plops into one of the chairs. In most cases, their entire demeanor changes swiftly. Eyes widen, smiles broaden, and they seem to forget their human companions behind them. Guys wearing ballcaps instinctively remove them as they see their holo-barber snipping around their actual heads. One visitor I spoke with afterward, a young white woman, explained her experience:

> I really felt transported. Like, I'm saying that now, but then I was just… *there*. I was in a barbershop in 1921, and I saw those guys as just people who were there with me. And I was one of them, one of the people who would've been there.

"When they sit there, people more fully imagine themselves to be back in the day," says Greenwood Rising operations manager Chris Rogers. He emphasizes the importance of the barbershop experience being early in the museum route. The next exhibit is called "The Arc of Oppression," featuring towering digital projections of flames and bombs and the sounds of fear and strife. "After the barbershop, things get real heavy, real fast. People maybe see the rest of that differently because they've had this first experience kinda trying on someone else's shoes."

History in the Making mural, Tulsa. July 18, 2022. Skip Hill in collaboration with Chris "Sker" Rogers. Sharon Mollerus, photographer. flickr.com.

RESONANCE

Among his many influential social theories, French philosopher Louis Althusser introduced the concept of interpellation to explain how an idea can get into our heads and affect us so deeply that we take it on and make it our own. This happens, he claimed, when we are called out and assigned certain roles in a social situation, often on the spot. The classic example is a police officer shouting, "Hey you!"—if you turn around in that moment, you instantly become positioned as a citizen with a specific relationship to law and authority. Many of the everyday roles we have in society (student, employee, consumer) are facilitated by virtue of someone calling us what they think we are—or, since Althusser was thinking about how power works, who someone wants us to be. Social norms, then, are maintained this way. But the same tactic can cause social change. Call someone by a different name, and they begin to think outside of their prescribed role.

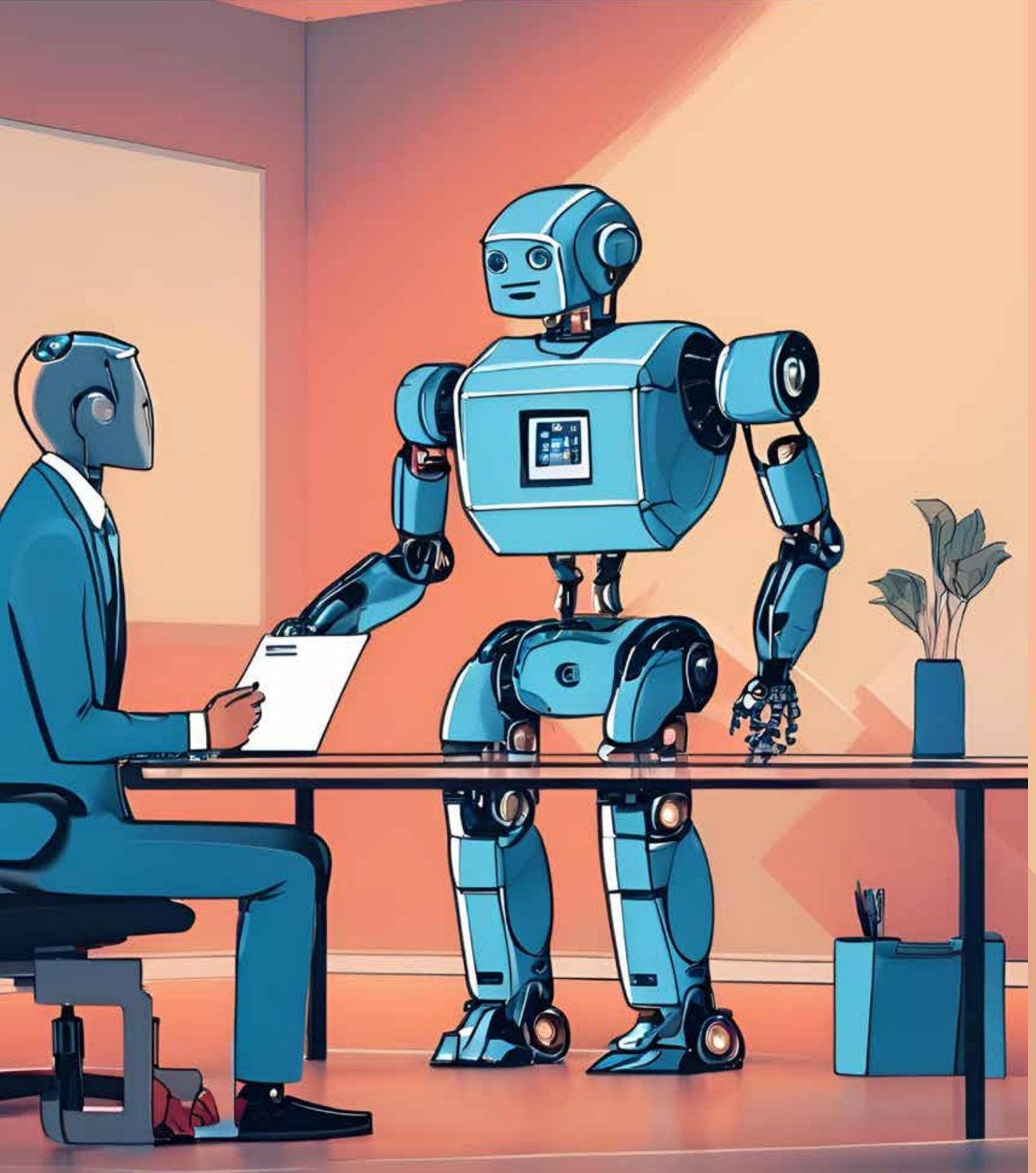
"It's not just an intellectual exercise. It creates a lived experience of another point of view," says Dr. Raymond Doswell, the current executive director at Greenwood Rising. He previously managed exhibitions at the Negro Leagues Baseball Museum, and his graduate study focused on experiences with the "Ghosts of the Library" hologram exhibit at the Abraham Lincoln Presidential Library and Museum in Springfield, Illinois.

At Greenwood Rising, every visitor is interpellated by the barbers as a neighbor, a local. You're called upon to come inside, have a seat, "welcome home." On the second *Star Trek* TV series in the 1980s, the holodeck was a virtual playground where flesh-and-blood humans, often donning costumes and assuming specific playacting roles, cavorted among digital hologram ghosts. The Greenwood barbershop is a holodeck, too, the initial difference being that visitors usually aren't prepared to don a new role, perhaps especially that of a Black person in 1921 Tulsa. It's a lot to ask but, per the museum's mission, there's a lot at stake as Dr. Doswell explains:

> Sometimes I feel we're too reliant on technology in these museums, but I can't deny how much it helps drive the story home. In a different, more important way, I mean. People can look at stuff in a museum and learn a lot. But when they become implicated as something more than just an onlooker, a bystander, the history being presented to them has much greater *meaning* for them in the here and now, which is the only place they can go to do anything good with it.

THOMAS CONNER is a visiting professor of media studies at The University of Tulsa. He earned a PhD in Communication and Science Studies at UC San Diego, and he is a former writer and editor at the *Tulsa World* and *Chicago Sun-Times* newspapers.

Installed on Greenwood Rising's exterior, James Baldwin's quote greets and guides visitors.



AI applying for job. AI-generated image. canva.com.

Museums Now Accepting Applications for AI

Can machines think?

BY CADY S. SHAW

In 1950, mathematician Alan Turing posed this provocative question and helped launch a new era of computer science. To test a computer's capability, he devised an imitation game experiment. Others joined him in search of the answer, and over time, computers began to solve rudimentary problems, learn from patterns, and even process language as they developed. Today, the game is still underway.

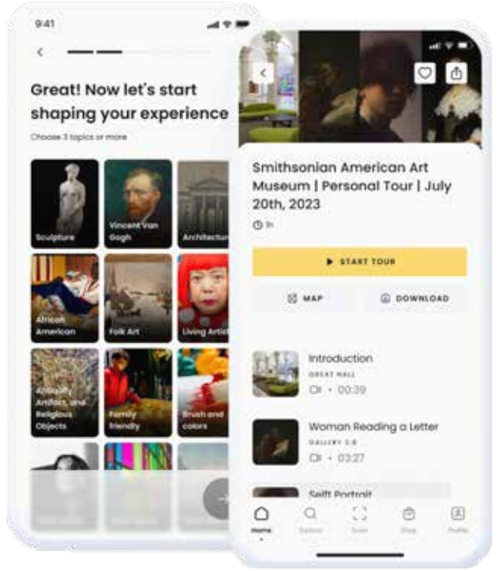
Artificial intelligence (AI) is everywhere, even in places people might not expect. Historically, museums have been seen as repositories of ancient artifacts and relics of the past, static institutions offering little connection to modern innovation. This "old school" perception often frames them as places where history is preserved, not where new technologies are applied. However, museums are dynamic spaces that evolve, incorporating new tools and ideas to connect with audiences, interpret collections, and preserve cultural heritage. From digital archives to interactive exhibits powered by AI, museums demonstrate that they are as much about the future as they are about the past.

AI can reshape how museums catalog, preserve, and present their collections and has the power to impact nearly every museum department, from curatorial and collections management to conservation, education, marketing, visitor services, and development, streamlining workflows, enhancing engagement, and driving innovation across the institution. But are some tasks outside its reach? Is a museum the realm of man, machine, or both?

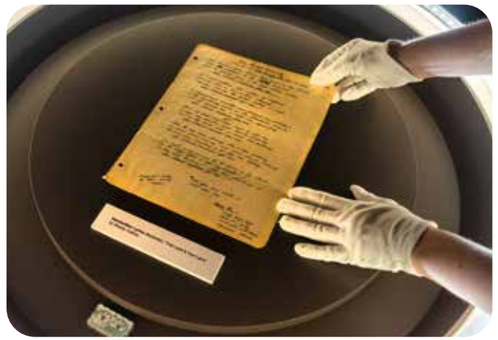
THE GOOD

The curatorial department offers perhaps the most possibilities, beginning with conservation. Items cannot be used for exhibition or research if they are in poor condition and conservation is expensive and time-consuming. AI can identify minute signs of deterioration before they become more advanced and continuously monitor environmental conditions in storage and display spaces to ensure a stable atmosphere, alerting staff about humidity and temperature fluctuations. With the information provided by AI, conservators can act proactively, preserving priceless works for future generations.

One of AI's most exciting roles in museums, however, is as an organizational powerhouse. Collections often include thousands or even millions of artifacts and artworks, far too many for a curator to analyze regularly, mainly because many museums don't have fully digitized collections, meaning there aren't images for each piece. To *see* the collections, a curator must pull racks and search shelves. Most museums have collections management software databases so they can easily find origin information, research the items, and the location of where they reside in their collection. AI systems can scan



The Smithsonian partnered with Smartify to create personalized art tours using AI. "Smartify's free personalized tours are tailored to your interests and the time you have available. Simply answer a couple of quick questions and we'll hand pick a collection of unmissable objects and captivating stories just for you." Smithsonian American Art Museum.



Archival items like manuscripts and photographs are highly susceptible to temperature and humidity fluctuations. Ideal environmental conditions are critical to their preservation. AI is already helping some museums better track conditions in galleries, storage areas, and even individual cases. Handwritten lyrics to "This Land Is Your Land." Courtesy Woody Guthrie Center.

Visitors using virtual reality to experience the Dust Bowl at the Woody Guthrie Center, Tulsa, Oklahoma. Courtesy Woody Guthrie Center.

these databases and recognize patterns, sort collections, identify missing links between pieces, and highlight overlooked artifacts. Machine learning algorithms can suggest pairings and themes that may not be immediately evident and aid curators in developing innovative exhibitions.

AI can also influence exhibitions by analyzing visitor preferences and engagement data, allowing curators to create and display exhibits that align with the interests of their target audience. This data often includes metrics such as how long visitors stay in a particular gallery, which artifacts or exhibits draw the most attention, ticket sales, the pathways visitors take through the museum, and even preferred topics of interest based on surveys or interactive feedback tools. By interpreting this information, museums can tailor their exhibitions to reflect audience interests.

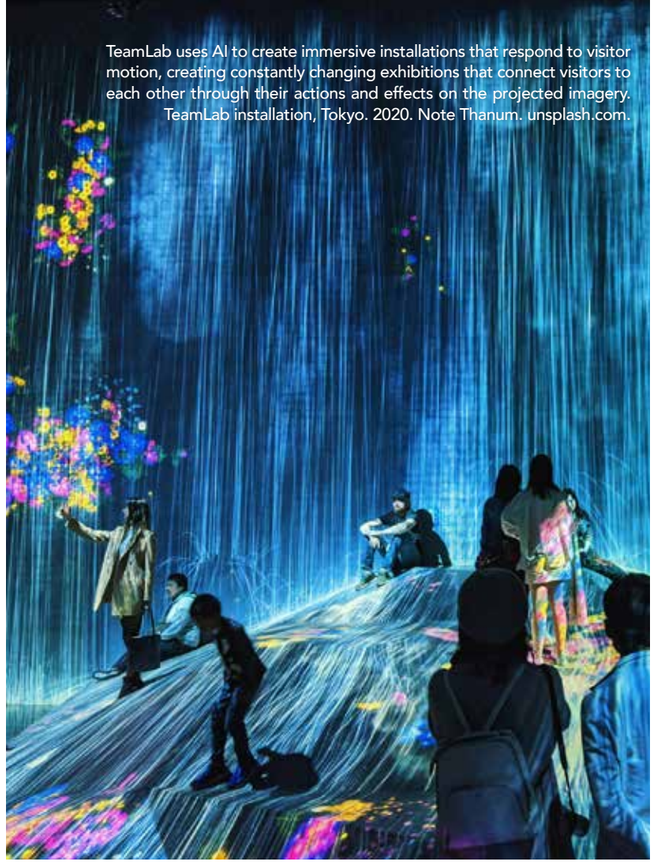
Additionally, AI can serve as a digital guide for museum visitors. Through natural language processing and computer vision, AI systems can engage visitors in virtual conversations about artifacts, provide background and historical information, or customize recommendations based on user input. A visitor may look at a historical photograph and ask questions that an AI assistant can answer in real-time, creating a participatory and personalized experience that can make museums feel more engaging and inviting. Finally, AI can assist staff by creating virtual exhibitions highlighting the museum's collections, both on display and unseen, making more of the collection visible to a larger audience.

Across these applications, AI can increase accessibility to collections while possibly saving time and money, two items always in demand among museums.

THE BAD

While AI is a powerful assistant, it comes with challenges that require careful management. Algorithms learn from data, but they cannot assess the accuracy of the data. If the data is wrong, what the AI learns will be wrong. This inability to analyze also makes AI susceptible to biases in historical records. If a museum's archives reflect biases or omissions, the AI may reinforce those gaps. Historically, underrepresented narratives are less prominent in the overall record. This can inadvertently perpetuate the exclusion that most museums are trying to rectify.

Furthermore, AI's interpretations lack the cultural context and intuition curators bring to their work. AI can recognize a painting's date, subject, or artist, but it may struggle to grasp nuanced cultural meanings. A curator's



TeamLab uses AI to create immersive installations that respond to visitor motion, creating constantly changing exhibitions that connect visitors to each other through their actions and effects on the projected imagery. TeamLab installation, Tokyo. 2020. Note Thanum. unsplash.com.

The reasons people visit museums are largely unchanged, but the ways they can experience them are evolving. More museum galleries are incorporating AI and other technologies to create hybrid spaces where visitors engage with the art based on personal preferences. State Library of New South Wales, Shakespeare Place, Sydney, Australia. 2023. Arie Oldman. unsplash.com.

understanding of complex historical events, artistic movements, or cultural symbolism goes beyond data points, requiring insights and innovative analysis that AI cannot easily replicate … yet.

When AI misinterprets an artifact's cultural significance or historical context, it risks presenting inaccurate or offensive information to visitors. AI misclassifications have occasionally led to labeling artifacts with culturally insensitive language or assigning the wrong origin, which can cause confusion or offense among viewers.

AI also lacks the discernment to prioritize cultural sensitivity over technical accuracy. Museums have complex ethical responsibilities in presenting cultural artifacts, particularly those belonging to Indigenous or marginalized communities. While AI can assist with cataloging and retrieval, it cannot navigate the complex ethical considerations necessary to honor these artifacts appropriately.

Hallucinations present another risk. This is the moniker given to AI-generated data that is fabricated but presented as fact. AI produces hallucinations not out of malice or impishness but because of how it processes and generates information. These errors often stem from inadequate training, where the AI has not been exposed to sufficient or high-quality data, or from inaccuracies and gaps in the information it scours to create responses. Without comprehensive, accurate datasets, the AI fills in the blanks, leading to plausible-sounding but ultimately incorrect results.

In the legal case of *Mata v. Avianca, Inc.*, a New York attorney used the popular ChatGPT to conduct his legal research. The federal judge presiding over the case noticed that some internal citations and quotes were nonexistent. The generative AI program made the sources up and presented them as available in other major legal databases. Even though this was a legal case and not related to museums, the fabrication of source

The British Museum blends old and new, not only in its architecture, but in its application of technology. They recently collaborated with the Alan Turing Institute to glean insight into visitor behavior and preferences utilizing AI. British Museum Great Court. Aurélien-Barre. pixabay.com.

documentation is alarming and cause for concern in museums—spaces where accuracy is a tenet.

Integrating AI into museums also raises important questions about its potential impact on the critical experience gained by interns, assistant curators, and early-career professionals. While it is true that AI can streamline routine tasks, allowing emerging professionals to focus on creative, interpretive, and conceptual aspects of their work, it must be noted that if heavily relied upon, AI could inadvertently limit hands-on experience with foundational skills such as object handling, manual research, and critical thinking in interpreting collections. Striking a balance between utilizing AI to assist and continuing hands-on teaching experiences is essential for developing the next generation of museum professionals.

AI IN ACTION

In 2023, the Nasher Museum of Art at Duke University tested the current, comprehensive ability of AI as a curator and revealed its potential and pitfalls. Staff asked ChatGPT: "Can you curate an exhibition from the collection at the Nasher Museum of Art at Duke University?" ChatGPT responded: "As an AI language model, I don't have physical access to the Nasher Museum of Art at Duke University's collection, but I can suggest an exhibition based on the information available online."

It selected dreams, the subconscious, utopia, and dystopia as the exhibition's themes. The AI-generated title, "Dreams of Tomorrow: Utopian and Dystopian Visions," fittingly encapsulates the duality of awe and skepticism that frames many perspectives on technology's potential impact in general. The exhibition examined the aspirational and cautionary narratives surrounding artificial intelligence, using approximately twenty artworks, interactive displays, and historical artifacts to spark dialogue about the future.

The immersive, thought-provoking nature of the exhibit successfully engaged audiences in conversations about AI's role in shaping society, but some elements faltered. An over-reliance on AI-driven curation lacked the depth and nuance a human touch provides.

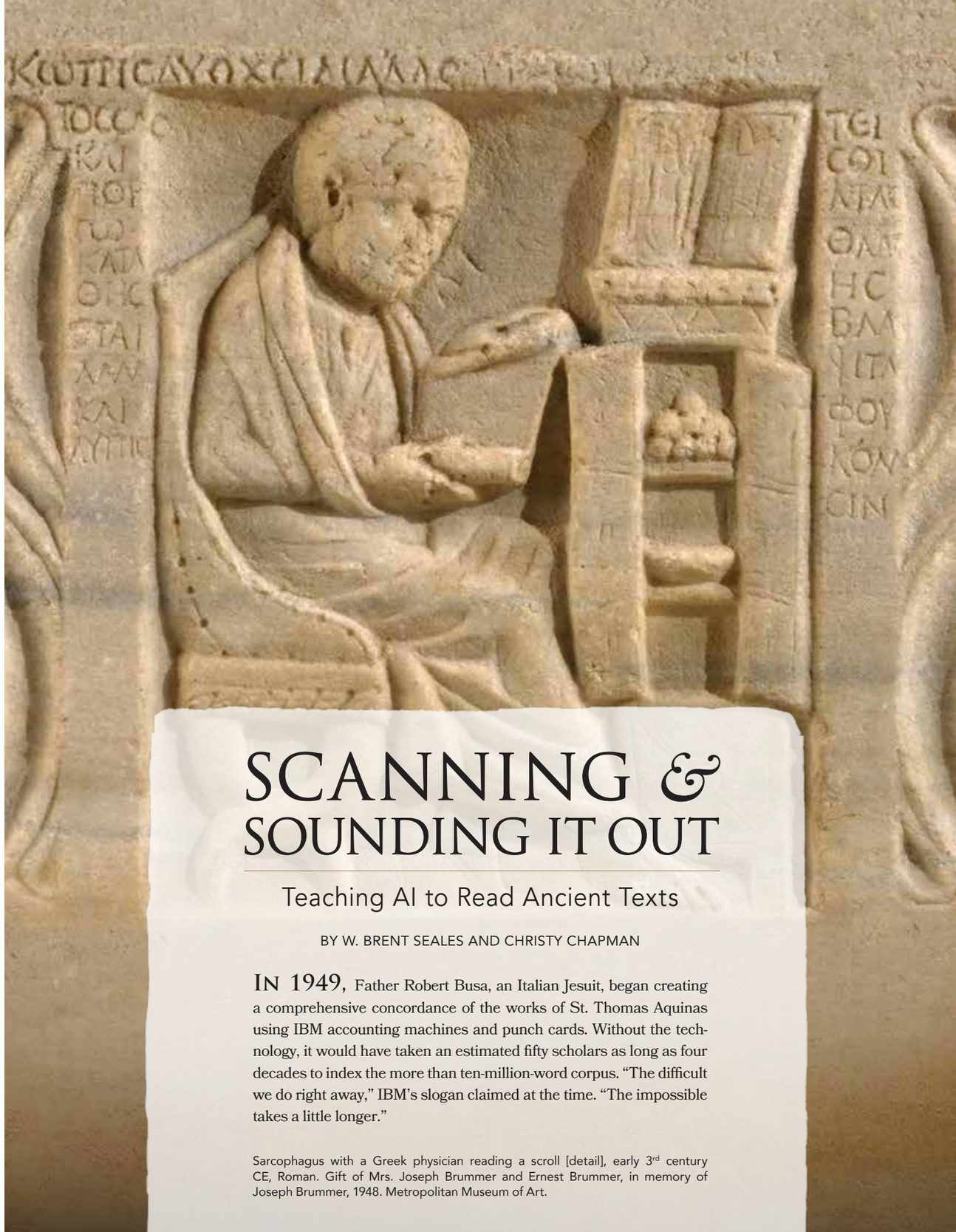
STRIKING A BALANCE

The future of museums is undeniably intertwined with the advancement of AI which promises to revolutionize every aspect of the museum experience. When thoughtfully integrated, it holds tremendous potential in museum settings and can become a valuable team member by supporting curators, enhancing visitor experiences, and helping preserve artifacts. However, it is essential to remember that AI is a tool—not a replacement for human insight.

Its role in museums reminds us of the importance of human judgment in stewarding culture. Used well, it is a groundbreaking tool for organizing, sharing, and protecting humanity's shared heritage. Yet for all its sophistication, technology must work hand in hand with the wisdom, empathy, and discernment only a human curator can provide.

Time will ultimately reveal the extent and effect of AI's identity and involvement on museums. "It seems like you can't quite prove who you are till you can prove what you do," said Woody Guthrie. "Your work is you."

CADY SHAW is a historian and museum professional whose work has won local and national awards. During her career of 20+ years, she has helped create tribal museums, cultural centers, and permanent and touring exhibitions. Cady is a proud alum from The University of Tulsa and a constant student of life. She is a Choctaw Nation of Oklahoma citizen and enjoys reading, live music, traveling, writing, baking, and spending time with her family. Cady resides in Tulsa, Oklahoma, where she is the Director of the Woody Guthrie Center.



SCANNING & SOUNDING IT OUT

Teaching AI to Read Ancient Texts

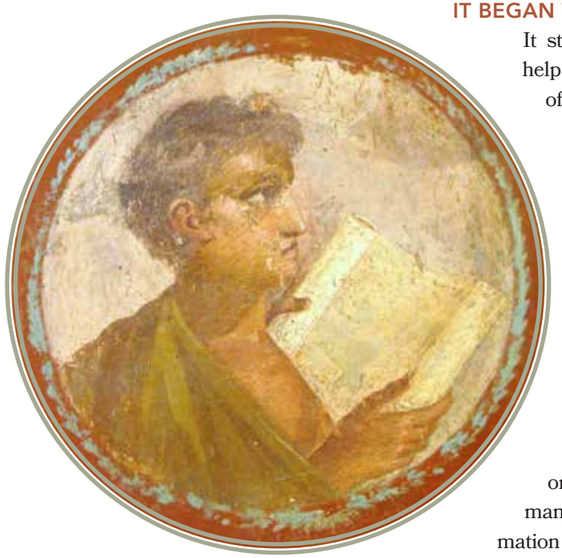
BY W. BRENT SEALES AND CHRISTY CHAPMAN

IN 1949, Father Robert Busa, an Italian Jesuit, began creating a comprehensive concordance of the works of St. Thomas Aquinas using IBM accounting machines and punch cards. Without the technology, it would have taken an estimated fifty scholars as long as four decades to index the more than ten-million-word corpus. "The difficult we do right away," IBM's slogan claimed at the time. "The impossible takes a little longer."

Sarcophagus with a Greek physician reading a scroll [detail], early 3rd century CE, Roman. Gift of Mrs. Joseph Brummer and Ernest Brummer, in memory of Joseph Brummer, 1948. Metropolitan Museum of Art.

Computerized tools have been helping solve problems in the humanities ever since, and today's technologies—especially those capitalizing on artificial intelligence (AI)—can do much more.

The suite of software algorithms our team developed over three decades can now "virtually unwrap" documents once thought irrevocably lost, including papyrus scrolls buried at Herculaneum by Mount Vesuvius in 79 CE.



Male Bust, from Herculaneum, ca. 1st century CE. National Archaeological Museum of Naples. Photograph by Olivierw. wikimedia.com.

IT BEGAN WITH BEOWULF

It started in 1995 when a humanities colleague invited us to help him create an electronic version of one of the oldest pieces of English literature—*Beowulf*. Located in London's British Library and dating to circa 1000 CE, it is the only existing copy of the epic poem, surviving a fire in 1731. Its charred and cockled pages, however, hid important parts of the text.

We built software that organized pre-existing photographs of the pages into a 2D "digital edition." Though pioneering, it was also limited because 2D could not create exact replicas of ancient texts, which are not flat. We needed 3D, but the tools did not exist. We would have to make them.

Using a projector and a camera that could acquire both a high-quality photograph and the underlying 3D shape of every page, we built a 3D reconstruction system that relied on visible light and required no physical contact with the manuscript. For the first time, we could capture accurate 3D information from documents. If we could electronically simulate the laws of physics in our software—for example, program it to mimic the pull of gravity or the force of a heated iron—we believed we could digitally "iron" the wrinkled 3D pages.

After successfully testing our algorithm with a hand-crumpled page of text, we returned to the British Library in 2000 to test our new system on another manuscript damaged by the 1731 fire, Otho B.x. Our process produced terrifically realistic 3D renderings of the eleventh-century collection, creating a completely new edition containing only flat pages, an edition that does not physically exist.

We knew then that perhaps most, if not all, physical processes, such as wrinkling, shrinking, and folding, could be digitally undone given the right starting point and the correct physics-based algorithms. Our thoughts turned to the most badly damaged items we could imagine: the Herculaneum papyri. Disastrous physical restoration efforts had been attempted since their discovery in the 1750s. It seemed impossible that a rolled, carbonized, brittle papyrus manuscript could be made readable, but that became our mission.

Rolled objects contain surfaces that aren't exposed, however, and our process relied on visible *surface* photography. Computed Tomography (CT) provided the additional one-half dimension we needed to perform a complete 3D unwrapping. With CT, X-rays expose inner structures in a volumetric way. A CT acquisition is fully 3D and non-invasive, but also metric—the structures can be accurately measured in global units.

Herculaneum, August 30, 2018. Rutger van der Maar. flickr.com.

Our first experiment was a complete success. We created a scroll prototype using paint and canvas, rolled it up, and imaged it using a commercially available medical-grade scanner. Not only were we able to see the ink, but we also virtually unrolled the surface to reveal the writing hidden within the folds.

This first experiment led to the construction of a complete set of proxies that we scanned and analyzed. Using this data over the next several years, we iteratively built a multi-step pipeline of algorithms that we still use today. **Imaging the document** uses micro-CT to show internal structures; **segmenting the layers** extracts layers and tracks their undulations to create a 3D representation; **texturing the layers** compares intensity values in the scans that can reveal ink; and **flattening the images** stretches the corners of the 3D surface to calculate target positions before pushing it onto a digital plane and smoothing the wrinkles. In the decade since our work on *Beowulf*, we had conceived, prototyped, and crystallized a computerized process that could digitally restore an object without physically opening it.

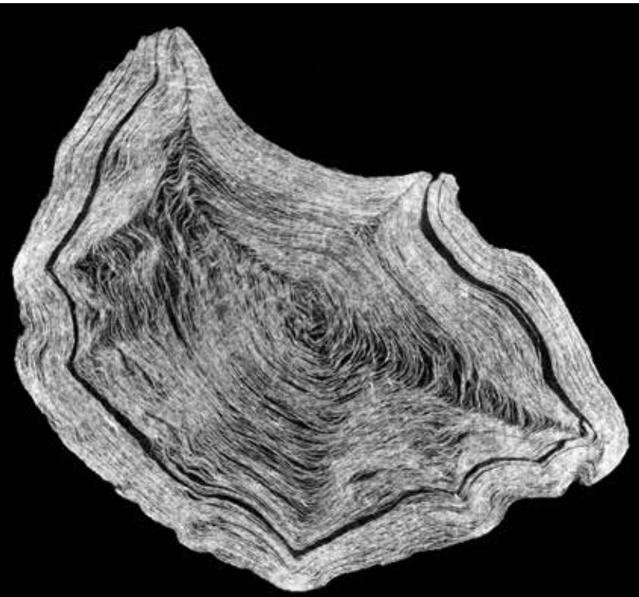
A HERCULEAN EFFORT

In July 2009, we turned to the Herculaneum scrolls and produced the first volumetric scan of one. We immediately realized that reading the layers was going to be more challenging than expected. Our software, by then a few years old, was ill-prepared to handle both the quantity of data and the complexity of the scrolls' internal structures.

Segmentation of Herculaneum scroll strata, as well as that of other ancient manuscripts, presents several unique problems. Depending on the type of material, scroll strata can appear fuzzy. Commonly used writing surfaces, such as papyrus, can easily fray or suffer fire damage, while fat deposits in animal hide can bubble. Furthermore, tracking a single stratum through an entire scan is made more difficult because undulations in the scroll strata can cause the separations between layers to disappear and reappear at random.

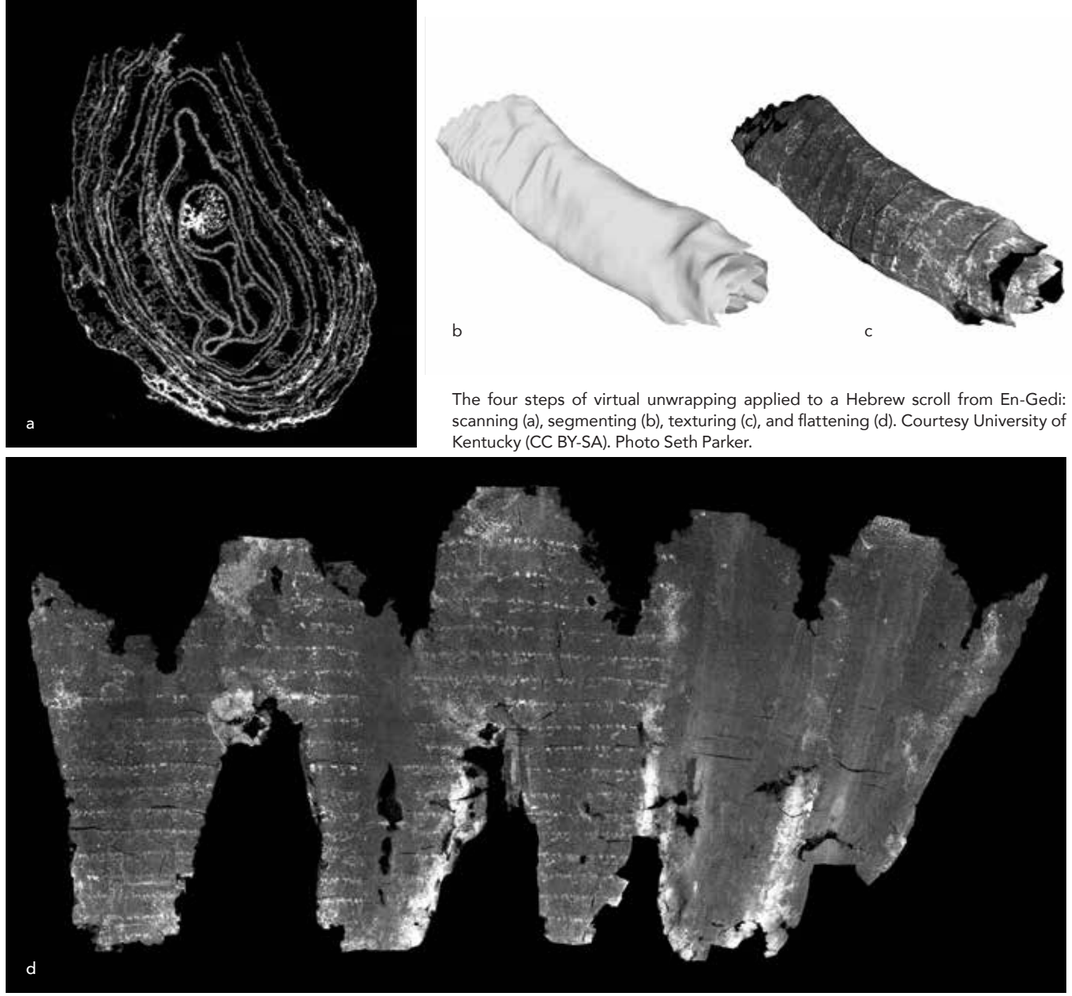
In addition to these material-specific problems, micro-CT introduces its own anomalies and deformities into scan results, such as beam hardening, streaking, and ring artifacts. We looked at these challenges and realized that our software pipeline was not yet ready to solve them.

The setbacks in processing the data from the Herculaneum tomography resulted in major software improvements over the next several years. While working on permissions to access material, we continued developing the software suite, maturing it until we had a new opportunity.



We knew then that perhaps most, if not all, physical processes, such as wrinkling, shrinking, and folding, could be digitally undone given the right starting point and the correct physics-based algorithms.

View of the internal structure of an intact Herculaneum scroll as shown in computed tomography (CT scan). Courtesy University of Kentucky (CC BY-SA). Photo Seth Parker.



The four steps of virtual unwrapping applied to a Hebrew scroll from En-Gedi: scanning (a), segmenting (b), texturing (c), and flattening (d). Courtesy University of Kentucky (CC BY-SA). Photo Seth Parker.

In 2014, Pnina Shor, curator and director of the Dead Sea Scrolls Project at the Israel Antiquities Authority, asked us to analyze CT data from a scroll that had been discovered in 1970 in the ruins of an eighth century BCE synagogue in En-Gedi. Charred and further damaged by 1,500 ensuing years of deterioration, it was impossible to verify the contents. Archaeologists had shelved it away in a vault for almost half a century where it remained untouched and unread.

We examined the data and in a few short months achieved the impossible. Using our process of virtual unwrapping, we *read* the scroll, without ever touching, opening, or even seeing it. "When we saw the results we almost fainted," Shor told the press. "We had been certain it was just a shot in the dark." Her shot in the dark turned out to be text from the Book of Leviticus. Apart from the Dead Sea Scrolls, it is the oldest found and the only one ever uncovered in a synagogue, making it one of the most significant biblical findings of the twenty-first century.

BACK TO THE LAB

Still the Herculaneum scrolls remained out of reach. The Insitut de France implemented a moratorium on studies of its intact scrolls and none of the other three institutions holding Herculaneum papyri were willing to collaborate. We also needed higher resolution micro-CT data if we had any chance at segmenting the layers to find ink. We firmly believed that with the increases in computing power and data storage, we would eventually acquire such data, especially if we could take the scrolls

External shape of a Herculaneum scroll being reconstructed using photogrammetry at the Library in Naples. Courtesy EduceLab, University of Kentucky.

Scroll from Herculaneum. Courtesy EduceLab, University of Kentucky.

Herculaneum scroll with red laser lines being scanned at Institut de France by Brent Seales and his team. Courtesy EduceLab, University of Kentucky.

to a facility capable of much higher resolution scans.

The carbon ink used to pen the Herculaneum scrolls posed a much more difficult problem. Because the chemical composition of the papyrus is similar to the ink, X-rays pass through both materials in almost the exact same way. As a result, the ink is "invisible" to the naked eye when examining the virtually flattened micro-CT images.

With the emergence of image-recognition technology, we wondered if it might be possible to "teach" a software algorithm what inked papyrus "looked like" in tomography versus how blank papyri appeared. A series of basic experiments revealed that micro-CT tomography does indeed capture information about carbon ink indicating morphological differences. Acquiring data at the highest resolution possible was essential if we wanted to detect carbon ink. So was a more sophisticated method for ink detection.

In 2019, we created an AI machine learning model for detecting ink in micro-CT. By aligning photos showing visible ink with micro-CT data of the same object, we trained AI to discern how the data appears where ink exists versus where it is absent. That same year, we also negotiated access to the two scrolls at the Academie des Inscriptions et Belles-lettres at the Institut de France and re-scanned them at the highest possible resolution. We also scanned four fragments that contained visible writing on the surface, providing the reference images we needed to train our learning model.

Armed with a new approach for ink identification and the "golden dataset" of high-resolution images, we declared 2020 our "moonshot" year, the year we would read an intact Herculaneum scroll. Unfortunately, 2020 had other plans.

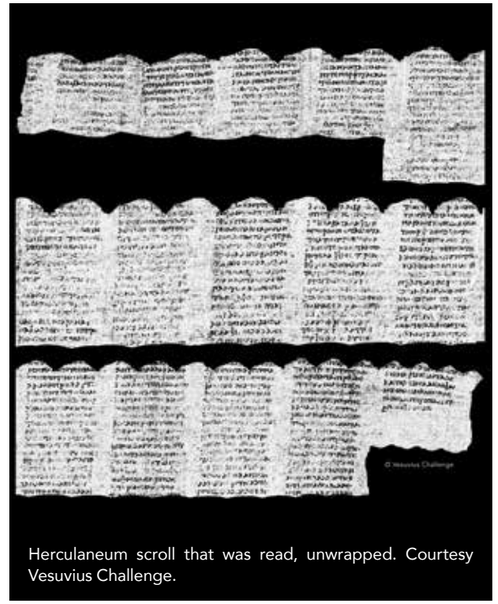
THE VESUVIUS CHALLENGE

By 2022, we had used the network to identify and render ink on a hidden layer of one of the fragments, but the intact scroll data remained largely untouched. Systematic research is a slow and often manual process. In the fall of 2022, however, we received a message from Nat Friedman, former CEO of Github, who had stumbled upon our research during the pandemic and was interested in helping accelerate our work.

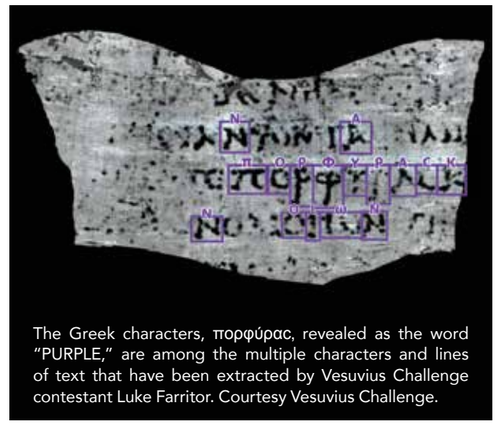
"What if we have a contest?" Nat proposed. He would use his Silicon Valley connections to raise a pool of money to entice the best and brightest minds in AI to confront the various obstacles impeding advancement. While the idea was intriguing, it was not without risk. We would have to share our best data, release our software code, and teach the contestants how to use our tools.

Would our partners, financial and otherwise, support this invitation for others to join our effort? Would they agree that it was a brilliant idea that would lead to accelerated findings and new results? What if the competitors easily derived a solution, making our prior work seem slow and trivial? Or what if no one succeeded, allowing the world to conclude that it truly was impossible? And what if the contest environment created chaos instead of research rigor? What if…what if…what if…?

In the end, the risk proved worth taking. The Vesuvius Challenge launched in March of 2023 with more than 11,000 entrants and 1,200 competitive teams generating more than 25,000 solutions in the first phase of the contest. By October, a 21-year old computer science student, Luke Farritor, had revealed the first complete word—*porphyras* (purple)—from inside a closed Herculaneum scroll.



Herculaneum scroll that was read, unwrapped. Courtesy Vesuvius Challenge.



The Greek characters, πορφύρας, revealed as the word "PURPLE," are among the multiple characters and lines of text that have been extracted by Vesuvius Challenge contestant Luke Farritor. Courtesy Vesuvius Challenge.

Technology and tenacity have returned content once thought lost. Marble hand holding a scroll, Roman, 1st or 2nd century CE. Rogers Fund, 1921. Metropolitan Museum of Art.

This achievement set the stage for the much more difficult Grand Prize competition, which required the winner to decipher four separate passages of text, each at least 140 characters long, with at least 85% of the characters in each passage being readable. In the end, sixteen partial columns of text were revealed. They weren't about science or technology, but the humanities— philosophy, to be precise. Epicurean philosopher Philodemus urged readers "As too in the case of food, we do not right away believe things that are scarce to be absolutely more pleasant than those which are abundant." Live our lives, his words extoll from across millennia, and enjoy the moments.

Throughout the world, badly damaged artifacts sit on shelves in museum and library archives, collecting dust while their potentially valuable contents remain locked away. Our dedication to perfecting our pipeline, coupled with our perseverance in the very human endeavor of building trust and gaining access to invaluable collections, has created a solution for restoring them. From the fused and buckled pages of disintegrating books to the inner wraps of carbonized scrolls and more, this vast invisible library can finally be made visible in a completely non-invasive, damage-free way.

This incredible breakthrough was due to steadfast progression—not only of systematic research efforts that would not have happened without the support of agencies and foundations such as the National Endowment for the Humanities (NEH), the National Science Foundation (NSF), and the Andrew Mellon Foundation; but also of collaboration among computer scientists, archivists, physicists, mathematicians, students, and Silicon Valley investors. As a result, we are witnessing only the beginning of what is sure to be many discoveries.

IBM was right. The impossible does take a little longer. Thirty years to be exact.

PROFESSOR W. BRENT SEALES is the Stan and Karen Pigman Endowed Chair of Heritage Science and the Director of EduceLab, a $20 million NSF and NEH-funded heritage science lab, at the University of Kentucky. He received his PhD in Computer Science from the University of Wisconsin-Madison.

CHRISTY CHAPMAN is Research and Partnership Director and Deputy Project Manager for EduceLab. She received her MS in Library Science from the University of Kentucky and specializes in information communication technologies, explainable AI, and metadata standards.

GOOD VIBRATIONS

BY NANCY J. FAGAN

Abstract design, 2022. Susan Wilkinson. unsplash.com.

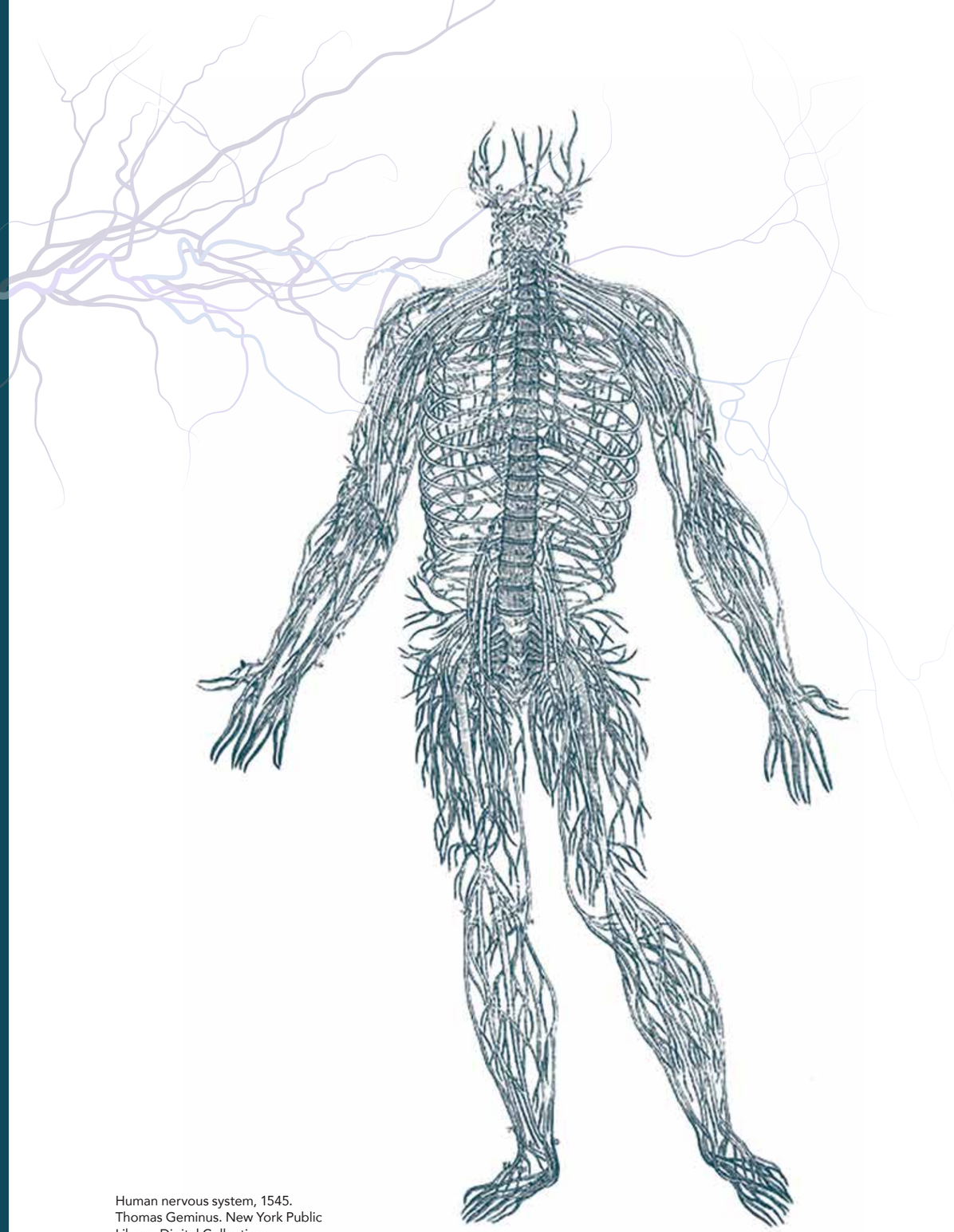
I wake at three in the morning, or thereabouts. I know the general time because my neck is vibrating. Every night, while I dream, my device fires during a randomized minute somewhere in those wee, predawn hours. If I sleep on my left side, the movement is startling and foreign, despite the many months the compact bullet of energy has rested deep against my vagal nerve, adjacent to my carotid artery. It does not wake me—that's my busy mind instead. My device, a vagal nerve stimulator, has released me from the throes of pharmacology costing thousands of dollars in medication each month, millions over a lifetime. More importantly, it has relaxed the grip rheumatoid arthritis has held on my life for over thirty years.

Rheumatoid arthritis (RA), or rheumatoid disease, affects over one million people in the United States alone. RA is not the same as osteoarthritis which naturally occurs with age or after joint trauma. I get the confusion—they both cause joint pain and swelling. But RA brings a bonus: it is a disease that leaks from the joints through the body to the organs. It's autoimmunity at its finest, a body attacking itself in a fit of rage, leaving erosion in its wake.

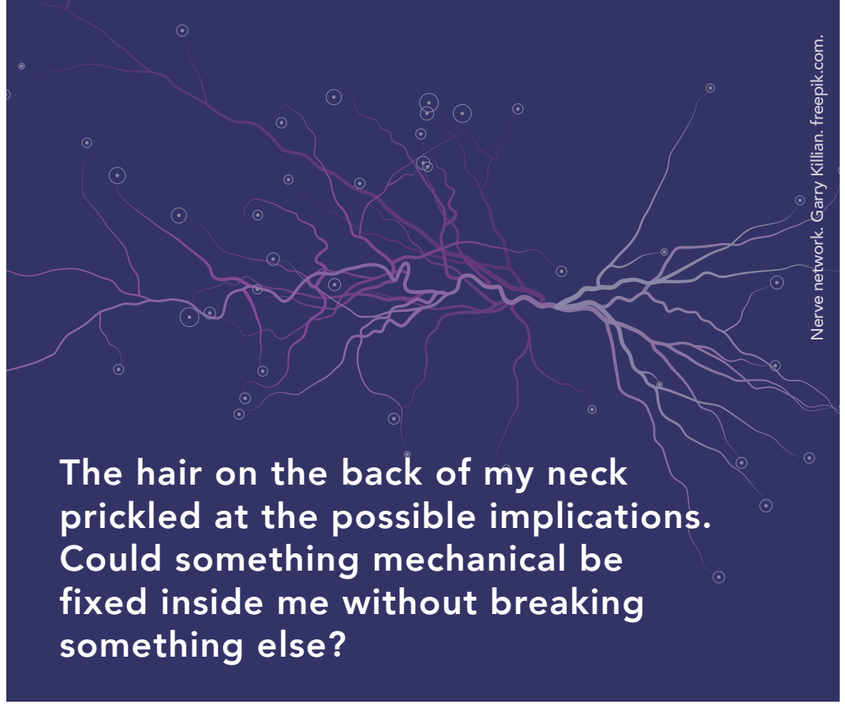
When you have a chronic disease that is hidden and you don't complain about it constantly, people assume you are fine. After thirty years of adjusting my life to suit the disease, people see the public me, not the patient. Not my early to bed days, afternoon naps, or the strain of folding laundry. They can't feel my ankles burning through the night despite medication and ice packs. No longer do I start the day at 5:00 a.m. in the gym for an hour on the stair-stepper before a twelve-hour nursing shift. Instead, I walk. I started slow. Five steps, then ten, and a few more each day until I reached one hundred. I consistently go one mile now, at least on weekdays.

I had tried one drug after another and sometimes three at once for months, even years, until my team came up with an effective treatment that had tolerable side effects. One that allowed me to engage with the outside world. One that provided moderate relief and rest. The curated combination of drugs also gave me low platelets, dwindling white blood cells, and squamous cell skin cancer. And only the inner circle of someone with a forever illness sees the effect of its chronicity on a spouse, a dear friend, or a child. My body is hard to live with.

So, when my husband asked me to read an article his friend recommended about an experimental, high-tech treatment, I had reluctantly agreed after rolling my eyes and adding a scoff. I thought briefly about the pleas from well-meaning friends and family to try emu oil, gin-soaked raisins, or a line of natural products. I had given up on miracles. But to my surprise, the essay drew me in immediately. It was not about trends. It was backed with science. And, as a nurse, science is my language. However, using a device to influence my immune system was beyond my imagination. I've often considered that the body, especially an organ like the heart, is mechanical. If the mitral valve is leaky, it can be repaired like the spark plug in an engine. Maybe even our neural pathways can be controlled. But I also knew the power the vagal nerves wield within the body as the regulators of many processes. The hair on the back of my neck prickled at the possible implications. Could something mechanical be fixed inside me without breaking some-



Human nervous system, 1545. Thomas Geminus. New York Public Library Digital Collections.



The hair on the back of my neck prickled at the possible implications. Could something mechanical be fixed inside me without breaking something else?

thing else? A form of the device had been developed already to mitigate seizures and alleviate depression, so I knew the device, the mechanics, had been well studied.

My curiosity piqued, I reached out to the company that manufactured the stimulators. For nearly seven years, I corresponded with them, outlasting staff members and physicians who moved to other jobs or retirement as the research continued. I decided to volunteer for their next clinical trial, but several pieces had to fall in place. They needed funding and government approval, and I would have to qualify for the study, go off my effective biologic medication for months, and undergo neurosurgery. Then there was the fifty-fifty chance that I would end up in the control group not receiving therapeutic stimulation for the first three-month phase of the trial. Was I ready to become part of an experiment?

I had depended on my medications to keep me healthy enough to cope with RA for decades. Without my injections and pills, even for a few months, my health would likely deteriorate. I struggled with the decision. I had waited out the FDA approvals through 2020, then the study was further delayed another year by the COVID-19 pandemic. When the invitation to apply to the official clinical trial appeared in my inbox one day, I took a deep breath and accepted. It was not until my first visit, where my history combined with my physical exam, that I was deemed a fully qualified trial candidate.

One month later, amidst the noise of the instruments clinking together, the masked faces above, and the straps that secured my arms, I saw my mother in the operating room. She sat in the corner with a quirky smile on her face, like she had a secret to share. I felt her around and within me, and I knew I was safe because she was there. She'd been dead ten years. I wanted her there at my chance to rid myself of my pharmacy, and to take a gamble that I might feel mostly whole again.

When I woke from the operation, my mother was gone, but her absence did not surprise me. The crisis of playing with my left vagal nerve was over, with the device firmly stitched inside where it will stay for the rest of my life. I tuned into the recovery room, much like the one I used to work in before RA helped me leave my job. I understood the lingo, the procedures, the consciousness level of the patients. The normal buzz of conversation and its interruption by ringing phones and patient moans. I smelled the lick of anesthesia on my breath; I was certain I could taste it.

Over the months of summertime, my dosages, in the form of amperage instead of needles, were adjusted. Frequent four-hour round trips to the study center with my husband-chauffeur gave us time to discuss how I felt, though specifics were difficult to qualify and made me cranky. I told him, instead, how I wished to feel by the time the therapeutic dose reached its ceiling. With each visit, the nurse raised her iPad and controlled me, entering mysterious numbers, testing my blood and my heart. An odd sensation came over me each time she programmed the device, triggering a hiccup or a cough in this early phase. How strange to have her connected by an invisible path to something deep inside my body.

By June and July, pain resumed in small bursts and seared into my joints. My stiffness and fatigue threatened to overwhelm the way it had thirty years earlier when I begged my rheumatologist for relief. It was clear. I was in the control group not receiving any therapeutic stimulation.

At any point, I could have exited the trial, but I reminded myself of the reasons I had chosen to participate. I considered dropping out then, before I entered the second phase, because I knew that pain relief would come after resuming my medications. It was a crucial point for me, knowing what worked and considering if I had the endurance to wait out the unknown course ahead. But I wanted to avoid the ill effects of drugs that had been on the market for a mere twenty years—not enough time to predict the long-term impact on my body. What other not-yet-identified dangers would surface and threaten my future? And critically, the study carried a guarantee that after three months, when I entered Phase Two, the device would be fully activated to deliver its true therapeutic dosage, regulating my immune system through the vagal nerve, its manager. The promise of a fully functioning device, along with my study nurse's encouragement, came together as an acceptable risk and I plodded on through days peppered with long naps and sighs. The second phase approached: The One Where Everyone Vibrates.

Over a few weeks, the true therapeutic buzz from the stimulator dampened my RA symptoms. "It's remarkable, isn't it?" I watched my rheumatologist pore over my hands, wrists, feet, and ankles. "I have no swelling. No pain." He is cautious with praise. Six months after going off my injectable for the trial, we decided to stop my other RA medicines. Within a year after entering Phase Two, the bottles of pills and capsules in my cupboard and the prefilled syringes from my fridge were banished. No more increased risk of skin cancers, lymphoma, or the need for medication to work through my tired liver to allow me a day free of pain.

Weeks of continued improvement ensued, without the biweekly shots, pills, and steroid injections that I'd taken for decades. However, the damage that was done before persists in my wrists and hips. And on occasion, a finger joint will be tender or puffy. I'm realistic about the future. We're treading through territory that might have pitfalls, drawbacks, or a day when my stimulation is not enough to hold my disease in check.

Today, post implant, I work all day, full time at my hobby that is now my new profession as a writer. Though I take most of the credit, my device helped me complete graduate school and allowed the energy to publish essays and stories plus find an agent for my debut novel. But the vagal nerve stimulator did not fix every issue. Aside from random joint tenderness, I also maintain a level of tiredness that supersedes the usual I-did-not-sleep-well-last-night. It is bone fatigue, felt inside out, like the sense of one's cells dying or reorganizing to mount a revolt. One of the study doctors says fatigue is indicative of my disease activity. Rheumatoid arthritis is still bubbling beneath the surface of my skin but it's no longer erupting. I also consider that my friends complain of tiredness too, so there is the possibility that something else comes along with being over sixty.

Last night when I woke at 3:00 a.m. and felt the buzz, I held a mix of appreciation with an eerie feeling. It was deep night, the windows were covered in blackout drapes, my husband snored lightly beside me. There was a lump of cat at the bottom of the bed echoing his rumbles while a piece of metal encased in plastic shuddered in my neck. In that moment, I wanted the device gone. Why couldn't I be well again without the extra metal inside? It's just too odd, too sci-fi. I was reminded of watching a *Star Trek* episode with my husband, when the ship's doctor ran a scanner over a sick crewmate's body and imaginary waves that healed and soothed made the patient well. I debated if I tricked myself into feeling better. I knew about the placebo effect and how our minds can temporarily produce a (false) beneficial result. But I had never lost touch with my body, so this felt like something otherworldly that I had no control over. Then the vibration dissipated. It ebbed so quickly, I'm not sure I remembered what it felt like when it gave me a tune-up moments before. I stretched and wiggled my wrists, then my ankles, and slipped into a dream.

NANCY J. FAGAN is a registered nurse with a BA in English from Mount Holyoke College and an MFA in Writing from the Vermont College of Fine Arts. Her essays about rheumatoid arthritis appear in *Kaleidoscope Journal, Breath and Shadow, Abilities—Canada,* and *You & Me Medical Magazine*. Her medically themed short stories appear in the award winning *Coolest American Stories 2023, Fiction International, NiftyLit, and Tamarind UK,* among others. She writes historical novels from her home in western Massachusetts. Follow @writerfagan on Instagram.

The original version of this essay appeared in *Kaleidoscope: Exploring the Experience of Disability through Literature and the Fine Arts* (Issue 88, Winter/Spring 2024).

ON THE CASE

An Interview with Genetic Genealogist CeCe Moore

BY KIMBERLY ROBLIN

CECE MOORE is a detective whose work is anything but elementary. She's a genetic genealogist who sleuths out crumbs and clues within paper trails and DNA's double helix to establish elusive connections between people past and present. From individual clients to celebrity guests on *Finding Your Roots* with Dr. Henry Louis Gates, Jr., she helps people pursue genealogy's central questions of who we are and where we come from. Over email, we discussed how technology impacts those answers and how the answers impact lives.

Family tree template. GDJ. pixabay.com.

CeCe Moore. Courtesy of CeCe Moore.

While the very specific and granular ethnicity predictions can sometimes not be wholly accurate, the DNA relative matching is *highly* reliable. I often hear people say that those on your match list *might* be relatives when, in fact, they are *definitely* your relatives.

KIMBERLY ROBLIN: *Technology and genealogy have a history. Microfilm. Internet. Digitization. And now, DNA. If someone had told you twenty-five years ago that by 2024 roughly one in five Americans had taken an at-home DNA test, what would you have said? Sci-fi or fervent wish?*

CECE MOORE: Fervent wish! Twenty-five years ago was *just* before FamilyTreeDNA offered the first commercial DNA test for genealogical purposes in 2000. Prior to this, a study using DNA testing to address the question of Thomas Jefferson's paternity of Sally Hemings' children had also just been released, garnering media attention. And, thus, genetic genealogy was born!

KR: *Several companies sell these kits today, but almost all test autosomal DNA, right?*
CM: Yes. Autosomal DNA (atDNA) is the type of DNA we inherit from all our ancestral lines, regardless of gender. We inherit 50% of our atDNA from each parent, about 25% from each grandparent, and approximately 12.5% from each of our eight great grandparents. This means that our genome is made up of big and little pieces of all our ancestors' DNA going back to, at least, our third great grandparents.

KR: *What role does atDNA play in genetic genealogy?*
CM: Genetic genealogy is the combination of using historical records (census records, vital records, newspaper archives, etc.) and direct-to-consumer DNA testing to learn more about a person's family tree and genetic heritage.

In traditional genealogy, we build our family trees back in time and identify ancestors, but the paper trail eventually runs out for all of us. We call this "hitting a genealogical brick wall." At what point this happens is different for everyone and is largely dependent on the populations from which one descends, but can also be influenced by other factors like adoptions, out-of-wedlock births, name changes, or other complex family mysteries.

Genetic genealogy can help scale those brick walls. Consumer DNA tests reveal ancestral origins (geographic regions) and DNA relatives. Many people just review their ancestral origins. However, the portion of the results that has the most potential for discovery is the list of DNA relatives. All the people on your "match" list share DNA with you because you have common ancestors. Extensive research into the family trees of your matches can help break down your brick walls. For people with family mysteries affecting their recent genetic ancestral history, such as adoption and unknown paternity, the family trees of those with whom they share DNA can help them discover previously unknown close, genetic relatives.

KR: *How can you also use these matches in reverse genealogy?*
CM: In cases where we are attempting to identify a biological parent or grandparent of a tester, or the DNA contributor themselves (such as a deceased Jane Doe or an amnesiac), most of the research focuses on descendancy or "reverse genealogy."

Reverse genealogy is building a family tree *forward in time* to identify all the descendants of a specific ancestor. But, it cannot occur until common ancestors have been identified among the trees of those sharing DNA with the individual in question by building their trees *backward in time*. If an individual shares DNA with multiple descendants of a specific ancestor or ancestral couple, then we can deduce that he/she must also be a descendant of that ancestor(s). This can be an extremely time-consuming process.

Genetic genealogy relies on having access to or being able to build the family trees of those with whom an individual shares DNA. A list of names alone is not useful without more information, which means that it typically requires skill in genealogical research and a significant investment of time to reap the full benefits of genealogy-related consumer DNA testing.

KR: *Genetic genealogy is clearly more nuanced and complicated than crime dramas suggest. There's no supercomputer identifying DNA within minutes. I'm guessing your hours are long and fall outside 9-5.*
CM: Yes, your guess is absolutely correct. I often research, building trees backward and forward, for long stretches of twelve or more hours, for days on end. I work seven days a week and have for many years. I'm sure I have spent more time researching genetic genealogy than anyone in the world! I have dedicated so much time working because the work is so important to so many people...and, as anyone who knows me can tell you, I am a little obsessed with it!

KR: *What other misconceptions do people have about your work?*
CM: That my colleagues and I have special access to private information and the actual DNA data. Most of the time, performing genetic genealogy is spent researching public records. The basis of our work is how much DNA two people share, that is what we focus on when we review a match list. From that information we can predict their likely relationship and how far back we need to build their tree to identify the common ancestor(s). Your DNA means nothing to me if I cannot build your family tree. To accomplish that, I use publicly available records and information that anyone can access.

Another major misconception is that law enforcement is using the major DNA testing company databases like AncestryDNA and 23andMe to identify violent criminals. Those companies have barred law enforcement's use of their databases and, thus, genetic genealogists are limited to the two smallest databases (FamilyTreeDNA and GEDMatch) for law enforcement-related work.

One more important and common misconception is that DNA testing for genealogy purposes is not reliable. While the very specific and granular ethnicity predictions can sometimes not be wholly accurate, the DNA relative matching is *highly* reliable. I often hear people say that those on your match list *might* be relatives when, in fact, they are *definitely* your relatives. If you have a close relative show up on your match list, this is not a suggestion or a guess by the company, this is a fact. It's unfortunate when I see someone discover a previously unknown close biological family member and the match is dismissed by the "found" family as not real. It is one thing to make an educated decision on whether to foster a relationship or not, but to reject someone who shares a significant amount of your DNA simply because

you don't trust the DNA test is a real shame and a missed opportunity.

KR: *There's such a ripple effect in genetic genealogy. Each new test result expands the genetic pool available for comparison and contrast. The individual act to take a test in turn helps others, unmet and unseen, find answers of their own.*

CM: You make a great point about how taking a DNA test can absolutely help others and make a real difference in someone else's life. Some people say to me that they don't need to take a test because they already know their family tree. Those are the very people who can help others solve their family mysteries. We need people to participate in DNA testing who have well-researched family trees and family histories. For them, taking a DNA test and contributing their family history can be a real service to others.

KR: *Sometimes they can even indirectly help solve crimes. You've worked with law enforcement on hundreds of cases, establishing possible identities for perpetrators and victims, sometimes leading to convictions and exonerations. When did you first realize the possibility of applying genetic genealogy to criminal cases?*

CM: Way back in 2011 when the atDNA databases were still tiny. I approached the two largest DNA testing companies about this, naively thinking it would simply be seen as a good deed. They both dispelled that idea immediately, believing it would halt the progress of the nascent industry in its tracks. I also posed the possibility to our tight-knit genetic genealogy community many times over the years and was met with a lot of concerns. Additionally, I interacted extensively with both the public and academics and became educated about their concerns regarding genetic privacy.

KR: *A recent Pew Research poll reported that 48% of Americans didn't object with DNA testing companies sharing genetic profiles to help solve crimes. One public database even has a name for it—genetic witnesses. But in 2011, genetic privacy was a new concept. What were the ethical considerations?*

CM: I considered the potential of identifying violent criminals and making society a safer place the highest and best use of genetic genealogy as well as my own skills, but I was very cautious about how to make this a reality and long considered how to proceed in a responsible and ethical manner. As a leader in the community who had long advocated for wide participation in commercial DNA testing, I felt I had a very real responsibility to those who trusted me and the countless people who took DNA tests due to my influence. I had a lot of sleepless nights for several years as forward-thinking law enforcement officials were contacting me about the idea of using genetic genealogy to identify and stop serial killers and rapists. I knew for a fact that we could do so. What was stopping me was that I strongly believed that people should have a choice in how their DNA is used (with the exception of those who leave their DNA behind at crime scenes) and I knew that the vast majority of the public and DNA testers had no idea that their DNA and genetic genealogy could be used in this manner.

> We could not have possibly imagined where we would be now back when I first became involved in genealogy.

KR: *What was the turning point?*

CM: In 2017, I started working with Parabon Nanolabs behind the scenes to explore how we could do it. We started working together to try to identify two Jane Does using GEDMatch, with the permission of the database's owners, but I did not yet feel comfortable trying to identify violent criminals. Then, in April 2018, the Golden State Killer was identified through genetic genealogy and that changed everything for me and for the field. Suddenly, there was widespread awareness that if your DNA was in the GEDMatch database, then it could be used by law enforcement. At that point and with my primary hesitation relieved, I formally joined forces with Parabon and finally started focusing my efforts and skills on law enforcement cases.

Much of my time and effort is dedicated to working on cases virtually unknown to the public. I have been able to help solve many. Unfortunately, some cannot be resolved through genetic genealogy because there is no DNA evidence to analyze. I receive a lot of emails from people asking me to assist in cases of known missing persons, but unless they show up as a Jane or John Doe or they or one of their descendants have participated in consumer DNA testing, genetic genealogy cannot help. Sadly, I have also heard from rape survivors who hoped genetic genealogy could identify their attacker only to find out that the physical evidence from their case was destroyed or lost.

KR: *Sometimes your work leads to difficult truths, whether it's on Finding Your Roots or working with law enforcement. It can change how people see loved ones and even themselves. How do you navigate that responsibility? Has anyone ever expressed regret about learning the truth?*

Dr. Henry Louis Gates, Jr. and CeCe Moore on *Finding Your Roots*. Courtesy CeCe Moore and *Finding Your Roots*.

CM: Throughout my life, I have believed that knowledge is power and, fortunately, my work in genetic genealogy has reinforced that belief. It is exceedingly rare for me to encounter someone who says they wish they had not learned the truth when all is said and done. As difficult as these discoveries sometimes are, in my experience, they have invariably answered lifelong questions for the individuals and families involved. I have witnessed this to be true in many cases even when someone was not explicitly seeking answers or received answers to questions they didn't even realize they had.

> The ongoing work being performed to identify the 1921 Tulsa Race Massacre victims is just one example of a very meaningful use of genetic genealogy to address past injustice.

After seeing so many people receive unexpected results and countless family secrets revealed through consumer DNA testing, several years ago I started warning people that they should not take a DNA test if they are not prepared to learn something unexpected about themselves and/or their families.

KR: *This reminds me of something you said in another interview, that every "individual has the right to knowledge of their roots."*

CM: Yes, as a genealogist, I strongly believe that everyone has a right to knowledge of their roots. As Alex Haley expressed in his famous quote, many people deeply yearn for this knowledge and I believe that everyone should be able to learn about their genetic heritage. However, that does not extend to the right to have a relationship with their biological family members. It is always my great hope that a new family member will be welcomed with open arms, but it is not a requirement. This means that the wishes of the newly found family members in that regard should be respected. I have found that when these potentially delicate situations are handled with respect and patience, many will eventually come around to wanting a relationship with the new family member. My advice is always consistent, but in the end, how things are handled is up to the individuals involved as it is their family, not mine.

KR: *While public libraries often offer free access to genealogy websites, at-home DNA tests cost on average $100 and 45% of Americans who haven't done an at-home test said they would if it were free. Do you worry about access inequity and it still being a matter of privilege?*

CM: Yes, I do and for this reason, I made the decision very early on to never charge anyone to find their immediate biological families and have upheld this policy throughout my career. I do not want only people who can afford it to benefit from the strides we have made in genetic genealogy. Since I am only one person and can only do so much on my own, over a decade ago, I created the DNA Detectives group on Facebook, where anyone can join to either learn how to use their own DNA results and/or find a volunteer who will help them with their search.

I also had a program called "Kits for Kindness" through which I would purchase DNA kits (using DNA Detectives' affiliate-related funds and donations) for those who could not afford them. We helped many expand their circle of love and family support through that program. Unfortunately, I no longer have time to run it, but there are many members of DNA Detectives who pay-it-forward by purchasing kits for those in need. The prices of the DNA kits have come down to the point where there is much less of a barrier, although of course some do not have any discretionary funds available at all, so assistance can still be needed. A DNA kit can now be purchased for as low as $39 during sales.

KR: *Dr. LaKisha David described genetic genealogy as a "potentially reparative process" for African Americans that can be a form of "restorative justice," reuniting individuals with the identities of their ancestors. How does restorative also incapsulate your work as well, with law enforcement, adoptees, and others?*

CM: I completely agree with Dr. David. I have witnessed this in action for many African Americans who have delved deeply into their family history through genetic genealogy. A wonderful example of this is my friend and colleague Charles Holman's research. Also, the ongoing work being performed to identify the 1921 Tulsa Race Massacre victims is just one example of a very meaningful use of genetic genealogy to address past injustice. Additionally, genetic genealogy has been responsible for so much healing for adoptees, "war babies," survivors and victims of violent crime and their families, the families of missing persons, Ashkenazi Jewish families torn apart by the Holocaust, and many others. It has fulfilled the yearning for answers for all of these individuals, many of whom have been wrongly denied this knowledge.

KR: *Where do you think the field goes from here? What will genetic genealogy and genealogy look like in 2050?*

CM: We could not have possibly imagined where we would be now back when I first became involved in genealogy and, later, genetic genealogy, so I think it is virtually impossible to predict where we will be in 2050! The interconnectivity of the world and access to digitized information has and will continue to make a huge impact on our ability to access knowledge and connect with others.

I've long predicted that we would be able to reconstruct our ancestors' genomes from their descendants and predict their physical traits from this genetic information. We have already made significant strides in this area, so I think it is a real eventuality.

> The potential for the future of genetic genealogy is virtually unlimited.

AI will also allow genealogists to make great leaps forward in their knowledge of their ancestral history and familial connections. This technology is already responsible for some of the amazing search functions and features at companies like Ancestry and MyHeritage. The potential for the future of genetic genealogy is virtually unlimited.

KR: *Technology and genealogy have a history and a future. The tools and applications will change, but not the reasons we inherently pursue it. Your work as a genetic genealogist will continue to give answers and insights. What does it give you?*

CM: I find great joy in providing longed-for answers and resolution to individuals and families in all aspects of my work. I get to do what I love for my career, while helping others in a meaningful and, often, life-changing way. I can think of nothing better than that.

CECE MOORE is considered an innovator and pioneer in the use of autosomal DNA to resolve unknown parentage and family mysteries, frequently consulted by DNA testing companies, genealogists, adoptees, law enforcement and the press. She joined Dr. Henry Louis Gates' team as the first full-time genetic genealogist on a TV series, *Finding Your Roots,* in 2013 and continues as such to date. A former Non-Resident Fellow of the Du Bois Research Institute at Harvard's Hutchins Center, she is now the Chief Genetic Genealogist for Parabon Nanolabs. Her work has led to the first conviction, the first conviction through jury verdict, and the first exoneration in criminal cases where the suspect was identified through investigative genetic genealogy.

Border image: Guilloche and ribbon patterns [detail], print. Late 18th century. Italian. Gift of D. Lorraine Yerkes, 1959. The Metropolitan Museum of Art.

NOTEWORTHY

OH RECEIVES AWARD FROM THE OKLAHOMA LIBRARY ASSOCIATION

OH was the 2025 recipient of the Oklahoma Library Association (OLA) Citizen's Recognition Award for *Let's Talk About It (LTAI)*. The award was presented by OLA President Gail Oehler at the Awards and Scholarships Reception on March 13.

Groups, individuals, and other non-library organizations who demonstrated a focused interest in libraries and their services statewide were considered for this award. The selecting committee considered the duration of this commitment; the community impact; the promotion of reading and local libraries; and the overall effect of this program.

The OLA works to strengthen the quality of libraries, library services, and librarianship in Oklahoma. Members of OLA work in public, school, academic and special libraries of all sizes. Members include professional, paraprofessional and clerical library staff, library trustees, students, volunteers, and many others.

"We are honored to receive this award," said Executive Director Caroline Lowery. "For forty years, we've worked with libraries across Oklahoma to bring communities together through conversation and contemplation. We are grateful to OLA for this recognition and the work they do to elevate libraries and library services throughout the state."

LET'S TALK ABOUT IT CELEBRATES 40TH ANNIVERSARY

In 1985, we launched our book club, *Let's Talk About It* (*LTAI*), with people, paperbacks, and a purpose: to bring communities together in conversation. This free annual reading and discussion program employs literature and meaningful conversation to encourage cultural, intellectual, and social connections. OH incurs all program costs, including books, shipping, and scholar fees.

LTAI serves on average over 3,500 people statewide in locations like libraries, veterans centers, correctional centers, community centers, and museums. In 2024, we shipped more than 1,000 books across the state to 54 communities.

These programs are made possible with generous funding and support from the Kirkpatrick Family Fund, Oklahoma City University, the McCasland Foundation, and individual donors and readers across the state.

Before the internet and before Kindles, there was *Let's Talk About It*. Technology is quickly outdated, but reading will never be retro. 1985, 2025, or 2065. It will always be on trend.

To find *LTAI* sites near you, visit okhumanities.org/events.

OH RECEIVES $40,000 GRANT FROM THE NATIONAL ENDOWMENT FOR THE HUMANITIES

OH is proud to partner again with the National Endowment for the Humanities (NEH) to combat hate and hate-motivated violence through their initiative, "United We Stand: Connecting Through Culture." Last year, the NEH approved a new supplemental round of funding dedicated to this initiative and OH received $40,000 to support ongoing initiative work. This follows the $50,000 awarded to OH in 2023.

"As Americans we share a responsibility for understanding and embracing our diverse cultural histories, traditions, and experiences, and for opposing hate-based violence and extremism," said former NEH Chair Shelly C. Lowe (Navajo). "The humanities strengthen mutual understanding by providing the context, history, and models of discourse that remind us of our common purpose and shared humanity. NEH is proud to participate in this important national initiative by awarding funding to our state and jurisdictional partners to support humanities programs focused on fostering cross-cultural understanding, communication, and resilience in communities across the country."

OH will utilize this supplemental funding to support *Let's Talk About It* and *Oklahoma Humanities* magazine, programs that foster cross-cultural understanding, communication, and resilience in communities across the state.

NATIONAL ENDOWMENT FOR THE HUMANITIES

FROM THE BOARD OF TRUSTEES

Sarah Milligan, Chair

Last year, Oklahoma Humanities successfully completed a federal compliance site review from the National Endowment for the Humanities (NEH). This provided a unique opportunity for the Board of Trustees members and staff to review and reflect on our work, mission, and vision.

The NEH is an independent federal agency that distributes Congressionally-appropriated funds for public humanities to the 56 state and jurisdictional humanities councils. Each of these designated humanities councils must undergo an analysis of federal compliance every five years to ensure that the councils not only comply with the requirements of federal spending, but are also models in nonprofit management while supporting and facilitating exceptional programming.

For this comprehensive evaluation, OH staff pulled reports, compiled statistics, wrote program summaries, and refined administrative documents. In late October, we hosted an on-site review team who attended sponsored programs, met with staff and Board members, and generally assessed the organization. While I know this process was onerous and time-consuming for everyone involved, it gave us an opportunity to self-assess not just the business of OH, but the culture and vision of our organization.

I am proud to report this assessment of OH's programs, procedures, and policies, concluded that OH was a model council. The official report was presented to the National Council on the Humanities in March 2025.

I encourage all of you to read a special document we prepared for the review team, "Comments from the Community: Selected Quotes that Demonstrate the Impact of Oklahoma Humanities Programs." This compilation of participant feedback provides a great overview of how our programs affect individuals and communities. Scan the QR code above to read it online.

We will continue to develop new ideas for refining program access and engagement, reaching new audiences, and forging new partnerships, ensuring that we continue to be known by state and nationwide peers as a forward-thinking and ambitious council.

Explore our events calendar to see this work in action. You'll find *Let's Talk About It* programs and discussion dates, grant-funded projects, and more. Thank you for your support and for playing a role in our success!

ABOUT OKLAHOMA HUMANITIES

Oklahoma Humanities (OH) strengthens communities by helping Oklahomans learn about the human experience, understand new perspectives, and participate knowledgeably in civic life. As the state affiliate of the National Endowment for the Humanities, OH provides and supports programming for the general public that uses humanities disciplines (such as history, literature, ethics, and philosophy) to deeply explore what it means to be human. OH accepts grant applications from nonprofits across the state for programs that may take the form of museum exhibits, film festivals, teacher workshops, oral history projects, or other formats that best serve local communities. OH also administers programs that provide free access to cultural humanities content, including: *Oklahoma Humanities* magazine; *Let's Talk About It,* a reading and discussion series; and *Museum on Main Street*, a collaboration with the Smithsonian Institution to provide traveling exhibits to rural communities. Visit our website to find an event near you, read magazine archives, or explore OH programs and grant opportunities. We look forward to hearing from you. (405) 235-0280 | okhumanities.org | ohc@okhumanities.org

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NEXT UP: SPACE | FALL/WINTER 2025

Humans instinctively fear the dark with one exception—the expanse overhead. For millennia, we've looked up and looked out into space. Our next issue reveals the power of the Pale Blue Dot; the diplomatic potential of space exploration; an Indigenous perspective on Lucy the spacecraft in the sky with stories; the experience of a total eclipse; and how comfort food takes on deeper meaning miles above Earth. The outer limits have always played a role in how we see ourselves. Before space was the final frontier, it was the first.