issue 1

{ decay }

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Editor's Note

QUOTAS PILE UP— to seize, detain, destroy. Texts and photo albums are trawled by border agents. They have a seeing stone, and know your face. Pleasure domes and corporate campuses dot the western expanse; go south and find desolate server farms condemned to eternal thirst. Flaming screens, flaming cities, flaming forests. Distant cries of prophet CEOs and their acolytes trying to summon an intelligence they believe is God. An Iron Dome through which demons deliver hellfire from the skies; more specifically, a General Atomics MQ-1 Predator equipped with an AGM-114 Hellfire. Data and flesh transubstantiated. Electronic pulse animating our dance to an oblivion.

It's bad right now. Fucked in a way I can't quite fully grasp. When I look for comfort, there's little to be found— least of all in the writing so often grouped under the genre of "tech writing." Critically minded magazines and editorial sections have shuttered in recent years, leaving behind a sad mix of thinly-veiled advertorials and hype-cycle reportage trying to keep up with the phallic Bezos rockets taking Teslas, crypto, AI, or whatever else to the moon. Even the critical spaces that remain have done so as exhausted watchdogs, diligently moving to the sober rhythms of positivism, empiricism, and pragmatism that confer legitimacy in our tech-

no-culture. What is overlooked is the absurd heart pulsing under it all. Post-enlightenment logics can only get us so far. After all, Peter Thiel thinks about the antichrist.

When I have come across some semblance of comfort, it has been in the weird and uncanny. One painting in particular has lodged itself into my imaginary: Hieronymus Bosch's *Garden of Earthly Delights*. To lose yourself in the painting is to lose yourself in a grotesque carnival much like our own. Monstrous creatures lumber about, consuming us. Ecstasy intermingles with dread. Bodies turn into things hardly recognizable. Rapture, apocalypse, revelation loom somewhere on the periphery. Through it all, it remains unclear whether we are supposed to be glimpsing paradise lost or hell becoming, or whether there's any difference.

It mirrors my feelings about our present technologized moment. After all, despite what we so often assume, technology isn't synonymous with the latest gadget, or digital this-and-that. It's method, technique, a way of making (non)sense of the world; it's fleshy and bloody and earthly and divine; a space where haunting spectra linger beyond the broken link. If language was one of our first technologies, then it makes no sense that technology writing doesn't give rise to more poetry. If our bodies were an ur-technic, the originary prosthesis that served as site to all other tools and techne, then shouldn't technology writing know how to dance? Chimeric creatures abound for those willing to take notice.

The Garden might seem like an odd place to begin for a technology magazine—this Eden is less origin than metastasis. But at some level it aptly narrates our technological beginnings; the expulsive sin of humanity was to obtain the originary prothesis of knowledge, of Prometheus's fire. Contrary to classical interpretations of the painting, which read a causal chronology of past paradise to present sin to future hell, art historians have suggested that the triptych's final panel is not a vision of the future but instead a reading of the present. It's then less a moralistic transcription of Biblical events than it is a consideration of the horrors of the then 16th century present as a reversal, a half-life, a decaying trajectory of humanity's technics cast as nuclear shadow. Faced with our 21st century horrors, we ask how the garden might appear to us today.

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THE CENTRAL PANEL of Bosch's piece is the contrapositive of Eden: not the condition of man before knowledge, but the one that remains after knowledge has been externalized, technologized, rendered monstrous and machinic. Where Eden stages a boundary—what not to eat, what not to know—Bosch paints the continuum of that boundary's collapse. The world, once known and therefore technologized, cannot return to its prelapsarian whole. This is what the name of our magazine, *Empty Set*, tries to speak to. The empty set contains nothing but is not nothing: it is a structured nothing, a something-nothing, a ground-zero which paradoxically marks absence through presence. Eden is often read as pure presence, but it is really defined instead by its absence—of fruit withheld and knowledge forbidden. Eden is not the abundance of pleasure but the absence of want. It is a negative architecture, the brackets, the maw you sense opening just behind you.

Rot is the moment of expulsion, the metabolization of the world into a state of perpetual decay. The Eden panel bears preserved fruit—likely laced with Sorbic acid and sorbate compounds to prevent microbial penetration, ascorbic acids to forestall oxidation—but the Garden is resplendent. This fecundity, however, is also what moves us towards decomposition. The final panel is a judgement to come that has already happened. Before us, before even Eden. The triptych is a loop, taking us back to a time underneath its beginnings, just as our own futures are powered by plant matter that died eons ago, minerals and elements made from the carved out hearts of dying stars.

Writing in the dust of this critical and techno-cultural landscape, it's only fitting that our first issue takes on decay. Though the millenarian promise of technology is one of eternity (eternal life, never-ending access to information, etc. etc.), it's rot that undergirds our world today: brainrot, entropy, planned obsolescence, 404 errors, poor images, lossy compression, nutrient-rich humus, carbon-rich biomatter turned oil and coal. It is a process that encapsulates the short-sighted excesses of our techno-culture while also remaining a potential force we might channel into new hopes. After all, without this decompositional process, there could be no regrowth, nothing underfoot for life to take hold of.

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TAKE A WALK through our decaying Garden then. Begin with Suspended Reason's reflection on the paradox at the concept's core, how the foundational breach that brings about death is the very condition of life. The inseminated fruit rots, liquefying into Luke Davis' fever dream of discovery and empire; meanwhile the rhizomatic topology of our own empire comes to life through basalt & sm downer's reconstruction of the Bay Area. But empire always crumbles, leaving behind its gloaming ruins, where one midwife searches for shunned knowledge in Bri Di Monda's epistolary piece. A message is left behind for the future. Then it's shot into space by Zach Peckham as a golden arrow in search of immortality.

If it's immortality you want, then it's immortality you'll get. The cost is just one son-turned-blood-bag— at least if you're the millionaire Bryan Johnson, who Kelly Pendergrast takes to task in her intravenous analysis of bloodsharing. But in the inevitable event that death meets Johnson, as it will all of us, what is it we'll leave behind? Nika Simovich Fisher meditates on this question by way of her friend's unexpected suicide and his decision to erase his web presence beforehand. The question of what is preserved and forgotten continues through Celine Nguyen and her exploration of the counter-archival practices being deployed for digital art, and Michael Thomsen's experience sailing on the Ship of Theseus that is *Destiny 2*.

After all, it isn't easy to deal with disappearance, especially when it's an obsession that vanishes. That can drive you to the brink, as Amanda Chen depicts in her story of a stan and a streamer. However, the gamer who has fallen into the world of dating-simulators in Chloe Yan's piece might argue that it's not just cold obsession, but love itself we find through the screen. Rob Horning isn't sold, as he critiques the chatbots that promise us company but really do little more than generate the conditions of our own loneliness. Though who can blame us. Anything to keep us from the overwhelming boredom that Lauren Collee senses at the edges of our overstimulated mediascape, a garbage dump increasingly inundated with AI slop that Michelle Santiago Cortés unveils in all its Gothic horror. Oozing, liquified matter that Terry Nguyen dutifully registers, tracks, and documents.

Still, one hopes we can find beauty amidst all the abjection. Steffi Cao looks through our cameras, peeling off her skin in a desperate search. Sheon Han has overheard engineers saying that we might find it in code itself. If such a thing did exist, it might look like Brandan Griffin's poems—which evoke the proto-life particulates of some unrealized literary organism. Creation is an uneasy process, as theoretical architect Patrick Danahy and artist Rachel TonThat well understand. What role might new technologies play? Or our dreams? But first, we must find the right words. No simple task. Thankfully, Emma Heath has offered a dictionary of decay to guide us through the end of the world, the apocalypse of Zachary Loeb's past. Yet even the right words decay, become calcified, carbonized like Michael Wang's ancient plant matter. By the end, we'll have returned to dust, but through the rot, we hope something else might have taken hold.

- L.K.

The Garden of Eden

1

Not decomp but composition: To know the rotting fruit we must recall its fertile flower.

Buzz of bumblebee, all sleepy-drunk. In swirling atmospheric soup, a pistil opens up to pollen—lets him into inner sanctum. There nucleus meets nucleus: her waiting egg is fertilized, a novel hybrid. The petals drooping drop & seeds develop. The pistil swells herself to ovary, a pregnant bulge, as all her skin slow-hardens.

The seed of rot is planted at the time of floral consummation. A seated bloom anticipates a mobile, longed-for Other. For bee-borne, wind-borne, and current-carried travelers. But her porous port & orifice, inviting guests, lets parasitic fungus pass: dormant, dwelling; biding, brooding; undetected patient waiting.

The first selection game has ended; now the second game begins. Not petals—perfume, flashy dresses, billboard flaunt for pollinators. But the fruit, its seeds, all sugarloaded: swollen brilliant-colored orb—a lure—a handshake for a hungry mammal. Who plucks & passes through the gut, so seedling's laid within a stool: a fecund brew in breakdown, unused excess passed, a fertile heaped recomposition.

2

Ovifissure: wounded womb, a gashèd entrance. Brown bag filled with ethylene gasses. Perhaps in a kitchen near you. (Set upon some laminate counter.)

The fruit ripens. Brownsugarcrystalline. A skin is such a thin seal. Just a small puncture at first, torn membrane, no forces to plug. Breach in the boundary, chemical guardian—widens, edges eaten, inner flesh exposed to outer world.

Cellulose to glucose. Smell of alcohol: the chem-sign speaks of over-ripeness, warns us off. Signature to drive the microworld crazy, whiff of whalefall.

Why does fruit keep an eggshell? Garden wall to guard its garden. Save its seed its yolk: for insulation; keep the birthing water in; keep the parasitic out.

To keep the out from spilling in; to keep the in from spilling out. Here, on the fifth floor, an apartment off Jaguaribe, Cris and I spoon fleshy innards of a maracuja out, with scrambled eggs, onto waiting platters.

3

Arid cold slows the growth of saprophytes. Put him in cryo, quick-cooled carbonite. Place his ribs in vac-sealed plastic, hung from hooks in walk-in freezers.

Archaeologists can dig a thousand years through desert sands; and a Cadbury's chocolate bar, from Scott's Antarctic Expedition, 's safe to eat a century later. But the Amazon by contrast leaves no traces—any hints of culture past have slipped away in silt.

Salt and sugar, through osmosis, suck the water out from meats and jellies, slowing germs and microbes. But heat and water speed the protein cycle: simple made from larger complex; complex made from smaller simples.

4

Enzymelange. Mycoflux. Fibereating fungus. Loss of structural integrity. Rigidgrid made soft & soggy.

To know woodrot, we must know wood: Bark; and heart; and deadcracked shedding rhytidome—outer layer, an inert, purely physical obstruction—stonewall—Then, the living phloem, transportation networks branching bud to root, and cambium for growth, and xylem wood for transpiration, working slowly to the core, where inside, heartwood's dead as well, and dense with tannins, resins, sealants, all resisting rot, the fungus and the soileaters.

Scaffoldbraces binding sheaths. Cellulose for tensile strength and lignin for compression. Flexgreen soft to rigid gridded wood, bleaching out and browning.

Heatscarred, stormsplit, prune-wounded, beak-drilled. Pried or split or splintered breach in outer bark. Airborne spores touch down on naked innards, start to reproduce: Fungus first digests the simple cellulose, and leaves the cubic fracture crumbled dry and spongy wood, stripped of all its carbohydrates.

Next the white rot's creeping columns climb toward hard-to-chew-and-swallow lignin. Decay decomp de-

camp most rapid near the base, where structure touches earth and saprobes work their way from dewy soil up. Hence concrete keeps the timber dry, a lime foundation, barren wasteland, in between the wood and dirt.

5

Fluidseep in fixèdstructure; leaky plumbing, underventilation, season's flood. If fungus lacks the needed moisture? Simple, ship it in, with sheer logistics Roman style: rhizomorphic aqueducts; invasion inland aided by a thousand lines of rail.

Water, substrate of solution! Water-death by dissolution!

All these complex bonds and patterns broken down to plainpure structures. Energy as heat released: The tempslowbuilding in the piledwood, the million fires of the microbes' metabolic furnace. Heat in turn speeds enzymatic breakdown: doubled rate for every ten degrees, a cycled feedback, within upper limits.

Heat, agent of entropy, expedite bondbreak! Heat, agent of life, let proteins configure.

6

Structure fair game when left unguarded, no more watchers at its walls. Gangrene: long-dead body tissue, still attached to living organs, slowly rots away.

The Sun King caught it, and Kahlo. Cigarettes in the nostrils at Ypres, keep the smell of death away. Mudswallowed; waterlogged and floating, trenchrat doting;

bones remain, mineral-hard, and weather slow but weather all the same.

Putrefact: a technical term: gassy build-up bloat-blotch, bodily discoloration. Fragrantfade cadaverine, sourtang and rancidreek. An animal, buried in muck, begins its autolytic process: self-digestion by internal enzyme (then the storied worms).

Unburied bodies, no such grace: to carrion and crow and blowflies in the eyes and mouth. (Their hatching young will feed themselves.)

As for decompogenesis? Some small such small comfort for the dead, like hemlock midst the sitka spruce, which seed the nurse logs' little wooden isles. Said von Braun and he should know: "Everything that science taught me strengthened my belief in spirit's continuity"—across the grave and through the soil—ashgerm cycle coming simple, so to one day build, with other simples, into great cathedral.

7

A dead tree? May stand for decades before falling. And a treated surface? Decades more: Smoked with creosote (κρέας + σωτήρ, "flesh-preserver"), or coated with chems, oil finish and water repellent. The trick is keeping liquid out. To close the porous wood with paint and primer, solvent and seal. Sun to speed evaporation; ventilation, wind-touched wood.

How to handle rotting beams: scrape the softened, scavenged wood with chisel, wire brush or drill; then

coat the hard uneaten wood with waterproof epoxy. (And fruit? A fridge, or amputation.)

Or rot will spread. The way that gangrene spreads, and poisons bodies, needs debriding. (Maggots used, even in clinics today, for clearing out dead tissue: placed atop the wound and under gauze they gnaw til rotted flesh is gone.)

In oaks, the hollowing-out is slow—internal weakness hidden, masked by bark as heartwood turns to dust. Some trees can stand a century—landlocked, heads cocked—their emptied bodies home to owls, bats, and rodents. Carpenter ants come after the fungus, tunneling through the now-soft wood, making it a home.

Rotting structure not the same as dead or lifeless structure; stone and metal do not rot but corrode, abrade, erode, and weather. Rot is what happens to once-living structure, that dies and undefended can be feasted on by scavengers, a demolition crew.

The rotted trunk or 2x4? A picked-over ribcage. Life's legacy, repurposed by other lives.

&

> *"After a few minutes the student returned with the description of the Ichthus Heliodiplodokus, or whatever term is used to conceal the common sunfish from vulgar knowledge, family of Heliichtherinkus, etc., as found in textbooks on the subject.*
>
> *Agassiz again told the student to describe the fish.*
>
> *The student produced a four-page essay. Agassiz then told him to look at the fish. At the end of three weeks the fish was in an advanced state of decomposition, but the student knew something about it."*

According to Pound, in *The ABCs of Reading*: The method of the 20th C poet = the method of the 19th C biologist = the method of the painter of still lifes. ("Description in detail, 'fore it decays")

A metaphor for memory. Maxwell's demon, shuffling nodes. All living forms? Are constant in rotting. Save what you can. Transfer the forms. First copy, second– endless copies.

And bits themselves can rot, at least in figures of speech. The links decay, the context lost deictic, all precision gone in treadmills, function degradation, incoherence—hence the IA, and the art of ten-millennium warnings. Obelisks, atomic priesthoods, hieroglyphics. Permapoetics: Preserve in verse a chiliad, as paper dries and crumbles into dust, or water wipes away the ink, or hardbaked clay, in flood, reverts to sludge.

Carve it, ye carve in stone, and the winds'll weather it down over ten thousand years, ten-thousand years of

breeze-blown particles, sanding abrasion. Leveled and beveled, saved in partial form by repetition: "Two vast and trunkless legs," now amputated.

9

For rot is not the only force, in this world, which battles with bonds.

Sbrigati, giovane vespa.

All layers will delaminate. Plywoodpeel & paintflake.

Crack under uneven loads. Cyclic stress become fatigue. Bowing under burden. Time-dependent, constant load, perma-plastic deformation. Straining under temps and pressure.

Fiberfrayed rope. Sunbrittled rubber. Chemcorrosion.

Abrasion rubbing at, thinning clothing—fabric's chafepoint. Freeze-thaw cycles pitting asphalt, opens potholes.

Lattice defects. Atoms vacant. The bigger the crack, the faster it grows.

Eccetera, perché la minesstra si fredda. And what beside remains?

BICESTER VILLAGE

Luke Davis

HE HAD BEEN DREAMING. It was the Age of Discovery. He had disembarked in
Acapulco. There were lucid categories of things. He rummaged in the marginalia.
He conquered his fear of flying. He was ruthless in his pursuit of the smallest
competitive advantage. The parrots kept materialising out the fog, and vanishing
again. It disconcerted him. The cantilevered joist had been his invention. He
thought proudly. It was the cornerstone of the company's success.
It bothered him. The falling out with Jay.
He longed to make a-mends. It was a parting of the ways. It was a cataclysm.

Sean was presenting difficulties. It was the hour before dawn. It beguiled him.
The seabirds were preparing to fan out across the bay. He wove his web of deceit.
The Governor had worn a brocaded fabric. It was a blue and patterned sleeve.
He'd need a few days to go over the details. The cannons pointed out to sea.
He imagined a cannonball splintering a wooden ship.
He had inside information. He was able to
leverage a bargain deal.

He wouldn't think twice before crossing him. It was his signature style:
leather jodhpurs and a pashmina. It was the sea of dreams he had been
travelling. It made sense. He had been carrying contraband. Antiquities
of Ancient Egypt and Mesopotamia.
The winds had been good
to him. He bit into a nectarine.

They had barrelled through the horse latitudes. They had made a surgical
incision through the spruce and laurel. They had spent some time in Denver.
They had only had one cassette. They knew those songs off by heart.
Nong had got caught with the guns and was doing bird in Acapulco.
He'd have to shed this identity. The skin was beginning
to itch. Alessandro was loitering by the pool.

It was a pig of a summer. They reached the Pacific through Panama. They scalped the codex. They made an impression in soapstone. They littered the trail with iconography.
Lotus flowers shimmied in the courtyard. What lay within that mighty blue lake he asked himself. Could a man truly lose himself there?

It was a simple tea hut. The couple who ran it had the gift of simplicity. They were simple. It was a nice view they had. The grass grew tussocky on the dune. The waves lost their balance.
The hotel was about a mile's walk away, along the coastal path.
People round here didn't like to talk about the island. He couldn't find a single fisherman to row him over, no amount of money could change their mind.
The map pointed to a cove concealed on the seaward side.
He licked his lips with avarice.

He'd backed Gross, Adams to the hilt. It had been a gamble. There had been a minor shareholders rebellion. Their forces had suffered a stinging reverse and retreated to the Pamir mountains. There wasn't much harm they could do from there, he thought with satisfaction.

He crossed that hurdle as he came to it. He jumped through the hoops. He opted to blow up the pipeline.
He was a Master of Affairs.

The cave was only uncovered at low tide. They had counted on that. The island had an ominous aspect. He could see why the locals avoided it. The sea-slosh menaced him. It slapped the tidal pools. He would have to be quick. It was a treasure beyond compare. It was the holy grail of automated reply services.

Kelp clung to his wingtips. He'd see about installation later. He removed a guppy from his breast pocket. A plaintive wind struck up from the west. It caromed around the ruined tower. The moon popped up over the horizon. It was getting dark. He would have to spend the night here. Lightning split our hysterical sky.

Goosegrass chivvied his leg. Burdock gave him anxiety. He prayed to Santo Domingo. The land here would furnish a meagre living. Beef lettuce grew here, and there were rabbits aplenty. He crumpled up his map. He already had what he had come for.

God was his sustenance. He gobbled the gold of the sun. He
grew aromatic. He wore a donkey skin.
His market competitors opened up
the land route to Asia. His eggs were all in one basket.
He lost grazing rights to the Green Beyond.
He retreated into himself. He found a cave of treasures.

He lived in the miasma of belief. He believed they could
drastically reduce production costs. It was a jersey with
the letter 'H' on it. He had domesticated, shyly at first,
several species of gourd. He nailed his colours to the mast.
He boiled the skin from frogs. Camembert was a rare delicacy.

Value was his lodestone. He knew where the eels congregated.
He knew where the turtles lay their eggs. He said Nature is a
Harmonious Balance. Wowie Zowie. There were tin deposits
in the hills to the north.

It was a curate's egg. He'd found it in the souk of Marrakesh.
He'd found it in an antiques shop in Chinatown. It was the
soul of the party. It was Pandora's Box.

Nigeria would fall into his lap. Mandalay was a foregone conclusion.
The Director of Unusual Circumstances was shooting him a
meaningful glance. But what might it mean? It was a fine
line. He had legitimate concerns. It wasn't the proper place. The
punch was getting warm.

It was a great, lost civilization. It was a loose affiliation. Let me call you back, yeah.
They'd long had their suspicions. Yeah, right mate.
It was the jungle perimeter again.
A python had swallowed the architrave. Rain rattled against the banana leaves.
In the shimmering city above the clouds. Tonto was dead before he hit the ground.
Kane hit the remote. Arrows swooped in from the upright.
It was worth it just to see your face.

And then you remember the world again, with all its painful necessity.
The garbage heaps up, even in a state of inertia. Dust barricades the doorway.
It is an easy, limber morning. Work stamps and stakes its claim. The meadows
outside of time grow rank. The fruit is not so sweet.

Lethe choked and spluttered. Computer games spit out their slogans.
Back in the world again.

He was cold again, in the small room, with the window open, for the smoke. Sleep was a stranger in a panic. He always woke in the dark. He wished he'd had more support. Perhaps he could of done it, with the proper support. He always drove them away, in the end. The price they required was too high. He washed in cold water. He smoked a neat cigar.

He'd locked horns with the administrator before. The lie he had been so proud of the week before suddenly seemed so flimsy. It was a crumpled shield. He left with a bitter taste in his mouth. A single doubt is enough to defeat you. It is a chink in the aura. The blade finds its mark. Infection pours through the breach. Until then, you never know if you are invisible or if you are already on the books and under observation.

It is the Dow Jones Index. It is Napoleon. It is the well run dry. They experimented on you when you were just a child. Your mind atrophied. They described you as a sucked biscuit. You were one of the ones they sent into hyperspace. Hurtling towards some distant star. Silence surrounded you ever after, it is the cloak of the incommunicable.

You found others, damaged by the ordeal. You rejected them after inspection. He pursued his stunned agenda. The horses bolted. He'd only had enough for a half. The fictions which sustained him were growing thin. He became visible to the enemy. He munched on the hedgerows. You wanted to find one left intact. You were desperate.

They went on their mad walks. The mania was burning itself out. It had been quite a ride. The air stirred with embers, air, flapping orange ash. They were mutually unintelligible again.

Fevers congregated in the backwaters. There were crocodiles in the mangroves. Life was a fiasco. They brooded over cocktails. They broke into intoxicated song. They regretted it the moment it begun. He'd almost merged with the symbiote. The separation, unavoidable as it was, had been agonising. He'd lost his rudder. He was adrift.

He'd own up to anything. His nostrils were full of vomit.
They'd given him the third degree. His heart was in captivity.
He was a prisoner of your love.

The ape had come with its own chain. It followed him everywhere.
It slobbered and whimpered for attention.

It said We are at the forefront of kitchen design and installation. He paused in his tirade. He remembered the days of longing, wanting anything but this. He remembered the first installments of the electric body, how the new nerves had shivered and trembled. He remembered Ronald Reagan's refulgent face. He clamoured sick for the amniotic fluid. They had sailed right through the fog, sublimity having the mastery of terror. It might have been Illyria.

You couldn't refuse the updates. Life became
increasingly impossible without them. You would lose your connection
to the survival server. You would be offline. You could access the updates
anywhere, even here on the island. Parrots perched insolently in the lower
canopy. Bush pigs cannoned through the undergrowth.

It was a cosmic bet. They bet on who would be the first to die. There was
all sorts of subterfuge. They locked in to ever-escalating drinking binges.
They tried to force the issue. They made overtures to fatal diseases. It
was a situation which had got out of hand. Sleep was a frantic stranger.

Rules were for the little people. He hadn't bothered to learn them. He was sure his heart beat to a purer motive. He prioritised a clean feed.

They were relegated to the dungeon server. It prescribed its bed of insulin.
It had taken years, or perhaps they were lifetimes, to work his way back
up to the light.

He would have to dismantle it. It was the site of too many bad memories.
Nights botched in too many ways to remember. It couldn't sweat out the poison.
Its flesh was bitter with it. He imagined a path to glory. If all the wrong
decisions could be righted. He saw the nights light up with triumph.
He could have been a human being. He knew exactly when he'd had his last
chance.

The river tumbled with washing machine caracasses and angle-poise lights.
It was a duty to remember it. He'd placed his pain beside theirs and made the
offering. The failure rankled. Mud came right up to the chin. The canyons rang
with choral song and goats. He hoped to make amends. He bided his time in the
bullfrog genus. The mud swamps blossomed.

There was never anywhere to hide. He wanted a refuge. He wanted it to be
safe from outside events. He wanted it soundproofed against tragedy. Death
leered at the glass. Existence made him puke. He turned the lens on the others
but he forgot to turn it on himself.

There were times he had almost walked by himself.
He had precisely calibrated the severity of each fall.
He never landed any harder than he thought necessary. He had forgotten how to
make himself feel good. He depended on the kindness of strangers.
He ate their cultivated fruits. He was a disgusting ingrate.

He had been chosen to speak for the entire human race. He was their mouth
organ. He said
this is a pipsqueak race.

Angels couldn't bring themselves to come down from heaven. They forsook their claims on earth. They refused their ration of pain. They grew increasingly unreal. We grew lean and ragged on it. We died of cancers.
The honeysuckle in moist profusion. What might we cultivate? What seed might we plant to the future? I wanted my plot of happiness to till. I had the right to subsist on misery. I puked back my grain allocation. I just wanted an amicable resolution.
Your readouts indicated a need for urgent intervention. You had run out of sympathy. You remembered your winter of heroism. You could never do goodbyes. There was a siren song it said give your body to the machine. This is what you had refused to do. Give your body to the machine. It was the song of God. It said, submit, proud one.
Do the will of the machine.

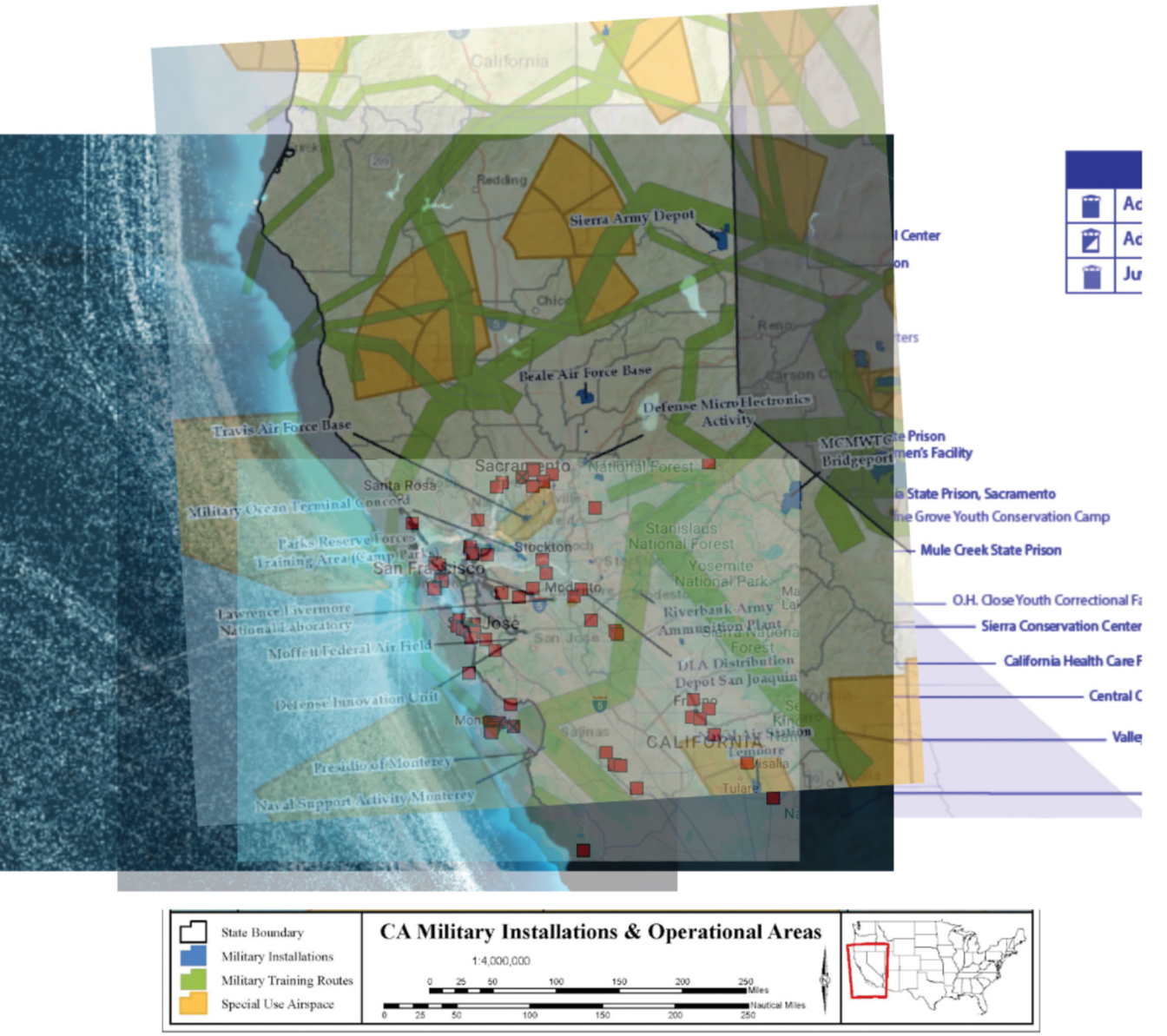
The compromise had worked for a time. It preserved his sense of exceptionalism. They told him how clever he was. He was adroit at avoiding all approbation. His ears excluded it at the entrance. The resentment mounted up in great billows about him. It was a great cloud of dust.

He wrote everything except his glum confession.
It rose up great coloured perturbations around this cyst.
It was either a failure of the body or of the imagination.
He wasn't sure which. He was known for a kind of impatient viciousness.
He was as malignant as a tumour. Lack of access to pleasure made him mean.
He wanted to drift on the fragrant emanances. He wanted to lie naked as a babe in the Vale of Beulah. His skin closed up like a reptile's.

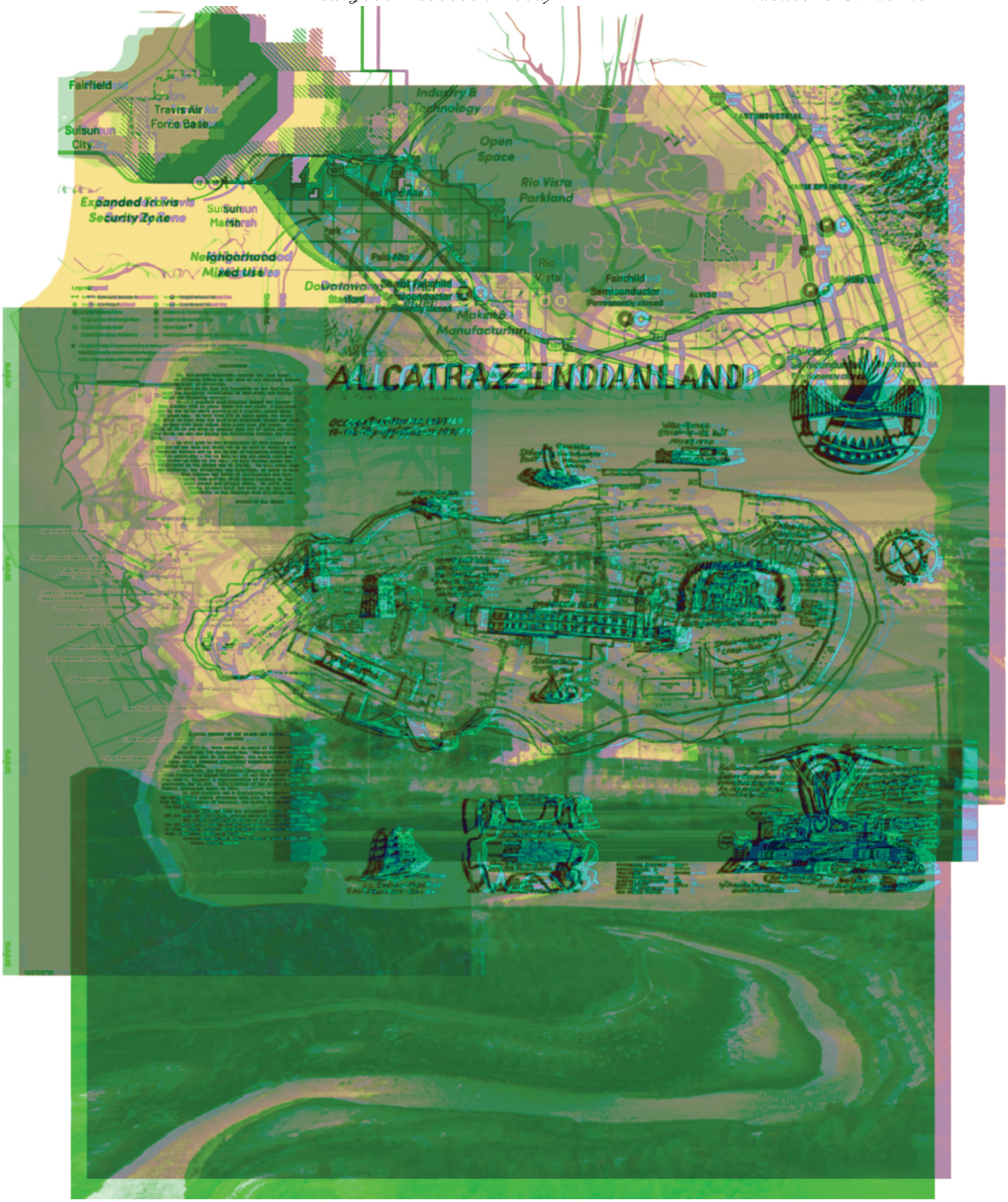
The pornographic uplands had scourged his eyes with light. He'd wanted to be encased in the yolk of happiness. He'd wanted to indefinitely postpone orgasm. The vomit on the console. It is a creamy field of toys. It is armageddon. He would have to grow a skin of inwardness. It had been stripped away. The cattle would have to graze. He would have to augment his day with sighs. He would have to repopulate orgasm. It was denuded of grass. He'd take time to heal.

The frenzy countermanded the pain. His grief latched onto the target like a desperate thing. It was a clean break with the past.
Orioles warbled from the headboard. Minaret splintered in Khartoum.

Luke Davis
is a poet



shipping routes, military installations, carceral centers & superfund sites



Lapping the bases and forever cities are Stevens Creek, the Klamath River, and a map of Alcatraz made by Joseph "Indian Joe" Morris from the Alcatraz Occupation, at a moment when the Red Power movement of the 1970s had reclaimed and repurposed "Indian" toward fostering a pan-Indian movement. Infrared imaging used by the military registers temperature as a spectrum of colors such as red, green, and black.

SUBJECT: SILICON FANTASY, SILICON DECAY

Silicon Valley is a place and a fantasy. The place is the unceded lands of the Ohlone, Coast Miwok, Southern Pomo, Bay Miwok, Patwin, Kashaya, and Mishewal Wappo people. The fantasy is opportunism masked as optimism, summed up best by Zuckerberg's slaphappy motto, "move fast and break things." Unveiled, this fantasy is simply the settler economy, one based in the predatory speculation of stolen land and the extraction of rare earth throughout the Global South. Shrouded in the technofascist mythos of social Darwinism, technical expertise, and design thinking, Silicon Valley appears less a harbinger of the future and more an iteration in a long history of speculative extraction, of land, and minerals from long before the 1849 Gold Rush all through the 1990s dot-com boom.

Growing up in the Valley, we came to see that the "American Dream" is a securitized dream. The long Cold War—the escalation of U.S. military occupiers into Asia and the Pacific, the originary accumulation driving the subsequent "brain drain" of tech workers from formerly colonized territories—puts delusion and lived reality into ever sharper relief. This contradiction is the origin for Cold War diasporas (our parents among them, from Taiwan, Korea, and Singapore) that then make home in the ethnoburbs latticing the Bay Area: diasporas born of militarism, now conscripted into laboring for the militarized industries of empire.

Despite the war economy that has driven Northern California's suburban sprawl, the sprawl remains a home. Over the course of three months, we embarked on a "remote tour" of Silicon Valley through a series of postcard exchanges over email. We returned to the rise of tech conglomerates from the sludge of the early chip economy; the incessant construction of new high-rises-cum-factory towns; the K-12 coding camps and the on-campus recruitment fairs for the largest arms dealers in the country; the tunnels beneath the parks, the tunnels harboring poisoned creeks, the drives past the shut gates of secretive military outposts. We ask: What do the ruins of Silicon Valley tell us about the production of waste and disposability? How does the war economy depend on detritus, from military ruins to microchip emissions? And what about the land that undergirds Big Tech–soil, water, and rock as grounds of present and future renewal?

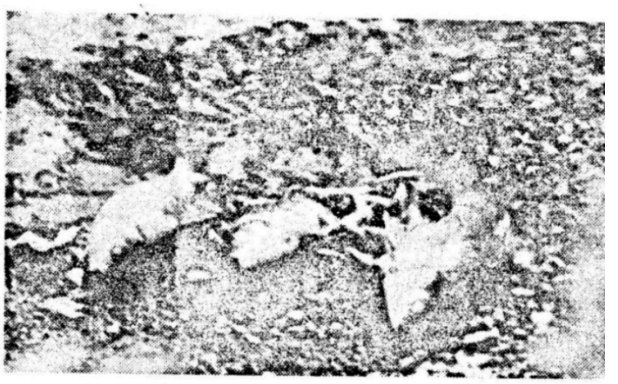
basalt h. + sm downer

01/25
s.m.,

When I return to the Bay Area, I return to Stevens Creek. The creek begins from the Santa Cruz Mountains and empties into the San Francisco Bay near Google's main campus. In my high school years, stoners, punks, and posers would hang around the bends of the creek, which ran through my neighborhood and along an expressway by my elementary school.

The Stevens Creek watershed once served as a source of freshwater before it became a dumping ground for semiconductor manufacturers in Silicon Valley. The earliest of these manufacturers was Fairchild Semiconductor, which got its start creating silicon transistors for military use in the 1950s. Wherever Fairchild went, labor strikes and groundwater contamination lawsuits followed. In the 1960s, Fairchild opened up assembly plants in Hong Kong and on Navajo Nation's Shiprock reservation, launching the development of an "offshoring" strategy that cut down labor costs on the one hand while evading environmental protection laws on the other. The waging of war is simply inseparable from the exploitation of labor and designation of sacrifice zones.

Minuteman interballistic missiles were downstream from the semiconductor manufacturing supply chain; upstream, companies like Fairchild dumped acids and solvents into storm drains. Beneath the smooth concrete of suburbia, these corrosive fluids ate away at underground pipes over the course of decades and bled into the Stevens Creek watershed. I've included a newspaper clipping about a chemical spill in 1978 from Fairchild: in Mountain View.



Some of the poisoned fish in Stevens Creek.

Did I mention that Fairchild Semiconductor's parent company was responsible for developing technology for aerial military photography? Meanwhile, on the ground, we lack clear imaging of the water and bodies poisoned by weapons industries. The grainy photograph of poisoned fish in Steven's Creek chafes against the frictionless image of Silicon Valley's economy. It chafes against the rise of "light" industry, semiconductor "cleanrooms," and the imma-

terial "cloud," Big Tech vocabulary that sanitizes the century of military contracts binding toxified bodies to toxified minerals to toxified soil.

Resting at the mouth of Stevens Creek, Google is a tomb. Its billion-dollar headquarters sit atop the superfund sites created by semiconductor manufacturing companies like Fairchild. Learning about the Bay Area's Stevens Creek led me to another Stevens Creek in Dimrock, Pennsylvania. Decades after the Fairchild spill poisoning the West Coast Stevens Creek, hydraulic fracking has poisoned wells and ponds along this other Stevens Creek on the opposite side of the country. In Dimrock, water from Stevens Creek once used for farming and drinking has become undrinkable and even flammable.

This year, I realized how little I knew about our drinking water. Where it comes from, where it goes, how it is diverted, what it feeds. I remember the headlines every time Taiwan experiences a drought: What about the chips?—whereas, the mangos, lychee and longan, bamboo, eels and tilapia…

01/25
basalt,

Poisoned fish, flammable water. I read your note while watching flames char the Pacific coastline on my phone. There is the ocean, caressing the carnage. And yet there is not enough water pressure to put out the fires. In Bakersfield, California, there is a bank that holds 1.5 million acre-feet of water. A majority stake belongs to the wealthiest farmer in the United States, who turns out to be two people: the Resnicks. Is water home and kin, or is it an asset, worth billions? As aquatic fortunes fuel the genocide of Palestinian people and the theft of their homelands; as do roasted pistachios, pomegranate juice, flowers, citrus, and Fiji Water; as I dreamt of olive trees. The people in the boardrooms and the backrooms call it disinformation- that it's all water that would have been "lost to sea"; that a genocide of an entire people constitutes "nothing to see" in the so-called Global War on Terror, a racial scheme within which the imperial core attempts to shield itself from becoming a target.

Imperial disavowal in the form of disinformation campaigns in the form of data streaming in the form of running water. Since learning about the water it takes to power a single AI search, I've consid-

Aerial view of Travis Air Force Base, Solano County, California.
Photo by Dicklyon via Wikicommons

02/25
s.m.,

Building a "city from scratch"—when the material of "scratch" is the acres of expropriated farmland, the conditions being the intensive displacement of Black and brown tenants and mortgage-holders required to make Solano into a blank slate. Fantasy displaces even without breaking ground, driving the predatory speculation that turns land into the raw material for soaring profits.

I'm struck by how Butler points out the dialectics between utopia and hell. It reminds me of how "utopia" originates from fictional islands of a fantasy society. Meanwhile, the Bay Area's actual islands form carceral archipelagos, from Alcatraz to Angel Island.

Of the many descriptions of Alcatraz—as FORT as MILITARY PRISON as PENITENTIARY as PRISON TOURISM—the one that stands out most is ROCK. Something barren, something incapable of life. So

ered how apt a metaphor "the cloud" is for the internet. From thirsty servers to thousands of cables trawling the ocean floor, the infrastructures of the World Wide Web can be mapped onto every phase of the water cycle. Do you remember the Diamond Princess from 2020? The cruise ship from Yokohama-turned-quarantine-zone, stranded at sea? (Literally a nightmare, if you ask me.) The government flew American passengers from Yokohama Port to Travis Air Force Base, 60 miles north of San Francisco.

Travis has an active partnership with California's private developers: Since 2018, a clandestine class of Silicon Valley investors has purchased tens and thousands of acres of the arable land around the base. The goal? To build a "city from scratch." "California Forever" is what they'll call it—a utopian "clean energy" metropolis built on stolen land otherwise capable of sustaining generations. Whole lifeworlds boiled down to a scratch in the earth, a starting line of an imaginary race to the stock market, to outer space, to the end of the world. I'm reminded of what Octavia E. Butler wrote about utopia stories: "I don't believe them for a moment. It seems inevitable that my utopia would be someone else's hell."[1]

much state documentation claims there is no record of activity on Alcatraz before Spanish colonization. This logic produces so many "uninhabitable" islands (from California's Alcatraz to New York's Rikers to Peru's Chincha Islands to the South China Sea) into spaces of military occupation, of carcerality, of settler isolation. Yet the "uninhabitable" conditions of each island produces its own demise. Consider: The Alcatraz prison compound was staggeringly expensive to maintain because of constant erosion from salt spray. This place was never meant to hold concrete and metal! The island rejects the settler project.

Then if I think about ROCK another way—as anchor, as steadfastness—a whole other side of history is illuminated. Ohlone people used Alcatraz as a fishing station; even its colonial Spanish name comes from alcatraces, or the gannets that would nest in these "uninhabitable" islands. It was also safe harbor for Native people escaping Spanish missionaries. There's a lesson in these islands as migratory nodes, as places of refuge, as places that fed—not to be owned or permanently settled. It wasn't always so inevitable for Alcatraz to become a site for prison tourism. I think of the generations of First Nation prisoners of settler war who were held on Alcatraz—and the key few who would be able to return decades later to join those displaced by the Indian Relocation Act. Together, they would form the Indians of All Tribes (IAT) and occupy Alcatraz in 1969. ROCK as the birth of the Red Power movement, stoking the flames of the growing Black Power movement. During IAT's 19-month occupation, Assata Shakur would visit as a medic and invite IAT to Harlem. "Sure," they said. "When are you going to liberate it?"

Ceremony on Alcatraz, which began the Long Walk for Survival from Sacramento to Washington D.C. in 1980. Long Walk for Survival was organized by the American Indian Movement, with leadership from Dennis Banks who participated in the IAT occupation of Alcatraz from 1969-1971. The ceremony marked a return to Alcatraz, in memory of the occupation.

Native students decided to get organized and occupy Alcatraz after a fire destroyed the San Francisco Indian Center. In the Rider-Waite tarot deck, the Tower card is depicted as a tower on fire. Christopher Marmolejo writes in *Red Tarot*: "The tower targets not only the annihilation of the property of plantation and prison, but also annihilation of the property relation that is whiteness." In the Bay Area, where Big Tech is simply the latest settler force, Alcatraz is the tower on fire.

03/25
basalt,

“Uninhabitable” raises so many questions: according to whom, by which criteria, during which seasons, for what reasons. How many lands and waters deemed uninhabitable have been targets of US imperial war—firebombed, irrevocably irradiated, stolen and eviscerated?

There's a reserve military base in Dublin, Camp Parks, that I used to drive by as a teen on my way to the BART. Commissioned in 1943, the base was one of three that made up "Fleet City," a network of military processing, housing, training, and medical facilities designed to receive and deploy US soldiers fighting in the 20th-century Pacific wars. In 1951, the Navy transferred ownership of Camp Parks to the US Air Force, which used the base to launch aerial warfare campaigns in Korea (and later, to the Army to train soldiers being deployed to Vietnam). That same year, Alameda County purchased the old Navy brig, repurposing it as the Santa Rita Jail, which is today notorious for boasting the highest number of in-custody deaths in Northern California.

Like "uninhabitable"—imperial destruction naturalizing itself as absence of habitat—the term "in-custody deaths" performs a sleight of hand: state-sponsored murder posing as custody and care. This is how traces of the American Dream’s original expropriation leave their mark on our daily architecture, from the homes we grew up in to the language we inhabit. Less common now, Quonset huts once dotted the Bay’s postwar landscape. Corrugated plywood-steel semicircular structures, engineered by the military for lightweightedness, packability, and replicability, Quonset huts contain in their name a theft from Quonset Point, in Namcook (Rhode Island), where they were first constructed; "quonset" being Algonquian for "small, long place."

We’re back to the dialectics of utopia and hell: The standard half-acre suburban front lawn depends on the six-by-nine-foot cell of solitary confinement. And then there is the question of how to bring this circuit to a halt. On the evening of July 17, 1944, "[p]eople throughout the Bay Area awoke to something that felt like an earthquake--a blast with the

Black stevedores handling explosives at Port Chicago
Photo by POCH 2,079 via National Park Service

force of five kilotons of TNT," according to Matthew F. Delmont, with sailors fearing "another Pearl Harbor."[2] Slipshod safety protocols had exploded two munitions ships at Port Chicago, 36 miles northeast of San Francisco, killing 320 people. Among the dead were 202 Black enlisted sailors who had been assigned to move thousand-pound bombs with little to no training. As a result? Fifty Black American sailors staged a work stoppage; they were arrested, threatened with the death penalty, and ultimately convicted of mutiny. They served years at Terminal Island military prison south of Los Angeles.

A flash of unbearable heat. Scattered limbs. Unrelenting grief met with the threat of the death sentence, dropped like a leaflet on the people shipborne bombs are intended to kill. The tower on fire, followed by the terminal island, followed by ?? What comes after the terminal island? Where else is ROCK?

In a video of a settler's bulldozer, churning the road to rubble. In the erosion of Alcatraz Federal Penitentiary under the slow, steady pressure of sea spray.

The IAT who occupied Alcatraz for 10 months. The 50 who refused to move weapons for the world's largest military, knowing they could be used to kill their own. The six Palestinian prisoners who dug themselves out of the Gilboa prison with plates, a kettle handle, and spoons.

03/25
s.m.,

Liberation by any means necessary—these days I struggle to remember that it is when empire is in its dying throes that it strikes with ever greater desperation. With the DHS and ICE abductions, I've been thinking about how the security apparatus, the surveillance technologies that target organizers— from the 2020 uprisings, from Stop Cop City, from the student movements for Palestinian liberation—simply would not be what it is without Silicon Valley and its patronage of Unit 8200, the cybersecurity and cyberwarfare arm of the Israeli Occupation Forces. The technological advancements of settler states appear to have no limits: the development of ChatGPT-like language learning models to surveil and intercept messages in occupied territories, repeated attempts to deploy facial recognition programs at Gaza's borders, etc. And yet, the fantasy of undefeatable power falls apart. The rock strikes the tank. The spoons break from the high-security prison. The paragliders breach the border. The fact is that even the billions of dollars poured into military technology do not guarantee greater precision or undefeatable might.

Al-Aqsa Flood, the Gilboa prison break—these are ruptures in the weapons supply chain much later down the line, at the very moment when the military or counter-intelligence arm deploys the weapon. Silicon Valley is located at an earlier point in the supply chain: research and development, the point of human resources.

I can't help but go back to my childhood cartography. In San Jose, I remember police precincts and military recruiters on my campus quad. I also remembered students whose parents scored them a summer internship at Lockheed Martin. I remember the recruitment fairs, the robotics contests, the NASA-sponsored field trips, the summer internships at Google, the billions in STEM funding from k-12 to college campuses to research programs. The eugenicist origins of Stanford, from Leland Stanford's horse-racing/horse-breaking kindergarten tracks to IQ tests. R&D science parks that sculpt the Bay Area, from San Francisco to the East Bay to the South Bay. The way defense technology companies prey on student debt under the guise of DEI. The way ROTC shapeshifts into

Organizers and activists with the Arab Resource & Organizing Center at the Port of Oakland, blocking a ship transporting military weapons to Israel in 2023. Photo by Sam Mauhay-Moore

loan forgiveness at Lockheed, at Raytheon. One summer I did outreach in San Jose near Moffett Field—a federal airfield that was established in the early 20th century as the first Naval Air Station in Silicon Valley. For years, working class and immigrant families living around Moffett have been organizing to shut down the airfield. Their children have been getting sick from the relentless noise and pollution produced by military fighter jets and airplane cargo. Children of immigrants displaced by U.S. imperialism–are they casualties or targets? And what about the Black sailors killed by the TNT explosions at the Port of Chicago? The reality is that preparation for war is war itself. The Black sailors organizing work stoppage halted the making of war across borders. This is why the state responded by jailing the sailors on strike. By jailing them, the state not only delivered punishment but also made it lucrative, redirecting the flow of profits for the war economy by filling the cages at home. When will the fantasy of undefeatable power shatter? What do we have to put down or take up to destroy the mirage?

04/25
basalt,

Today I'm writing you from Jeju, another terminal island where, in 1948, a massacre perpetrated by the South and facilitated by its US military patron stamped out a multi-year uprising protesting separate elections and thereby Korea's permanent division, leaving one out of ten islanders dead. Today, Jeju remains marked as a "Red Island": a so-called communist stronghold, but also one that has been washed in the blood of illegitimate occupation. Being surrounded by water reminds me of the Pacific coastline, where the mundanity of war is borne by the earth. From the steel ruins of defunct continental railroad tracks, constructed by coolie labor; to the R&D-driven pavement parks that stipple today's Bay in exchange for municipal funding; to the rise of ChatGPT and fascist AI art that treat the world as a series of surfaces, the ethos of "move fast and break things" at the core of silicon capitalism finds its limit in the land, the sea, our bodies; in our collective porosity.

Camp Parks was one of numerous designated cold war nuclear testing sites across the United States and its imperial conquests. From 1959 to 1980, the Navy and the Office of Civil Defense exposed people, plants, and animals to radiation, from growing crops in soil shocked with plutonium to raining irradiated sand onto rooftops to simulate nuclear fallout. One local hired as a shepherd recalls being tasked with burying irradiated sheep, sans protective garb, and how "their limbs would fall off

in his bare hands."[3] In 1983, his daughter was born without a trachea.

From superfund site to aerial target to company plaque, every surface is a record of depth. So there's something ironic about the fact that tech moguls are begging to be launched into outer space; that venture capitalists assume the title of "angel" investors; that Santa Monica's tech bros keep squandering precious planetary years on commodifying literal sunlight. Once you've extracted all there is on earth, where else is there to go but up? Bezos in a rocket, the aerial view from the cockpit: It's death drive shit.

What David Harvey calls the spatial fix (naming how capital overcomes crises of overaccumulation by relocating from place to place) perhaps finds in dissociation its psychic mirror. US imperialism wages fragmentation upon our relations, dispossessing whole peoples of their land and histories, depending on the distance of decades to suture the irreparable wound. Yet, to quote Thuy Linh's Tu, wartime is "less a temporality than a sensibility" that has little regard for the passing time.[4] The war for our attention isn't just happening on our screens-every war is a phenomenological and epistemological struggle over how to sense, and make sense of, the world.

Aerial photograph of Parks Air Force Base, California
Photo by USAF Photograph via Wikicommons

Writing to each other, these postcards attempt to tune into the frequency below the clicking and the whirring, to the seeping and the stirring- the poisoned creek, the buried limbs and sheep, the imperial ruins beneath, above, and everywhere around. An homage to taking the long way home. In that space of suspension, the technocracy's fantasy of frictionless progress grinds to a halt. The refusal to load munitions or to program apartheid; the defacement of harms dealer headquarters and the rematriation of stolen land; the undamming of choked rivers and the prison break launched from the river to the sea. We follow the

chorus of refusals and organized resistance to the place of mending— less a place than a process of wayfinding within ruin; mapping our relations with the dead and the living; inhabiting the time of rock, roots, and sea…

1. Octavia E. Butler, 'The Book of Martha' in *Bloodchild and Other Stories* (1996), 2nd ed. New York: Seven Stories Press, 2005.

2. Delmont, Matthew F. *Half American: The Epic Story of African Americans Fighting World War II At Home and Abroad*. Viking, an imprint of Penguin Random House LLC, 2022.

3. Dvorchak, Robert. "Cold War's Unwitting Warriors Wonder About the Past, Future." *Los Angeles Times*, 13 Feb. 1994.

4. Tu, Thuy Linh Nguyen. *Experiments in Skin: Race and Beauty in the Shadows of Vietnam*. Duke University Press, 2021.

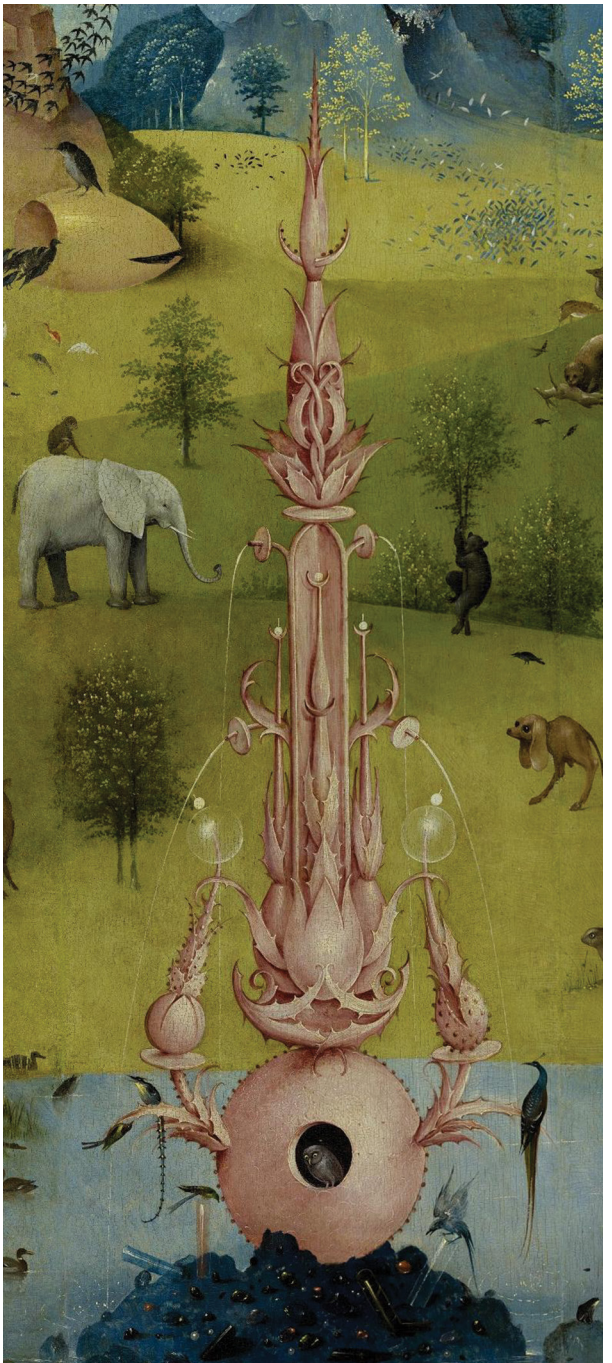
SM Downer is writer and researcher. They are still tending the question of how to make a map of memory.

&

basalt is a writer and researcher based in Brooklyn and the Bay Area. Their first manuscript EARTH INTELLIGENCE forms a poetics of exhausted soil, mined sand, and militarized islands from the detritus of the u.s. war machine.

Old Ruins

Bri Di Monda



Magdalena—

When I was a child, the amphitheater, also known as the Colosseum, was still half-covered by a mound of dirt and vines, buried from an earthquake that my grandmother said destroyed half the town center and set fire to a dozen homes. She was the one that told me about the amphitheater, disguised as a hill most people gave no more than a passing thought to. She spoke of a structure built out of marble, a place dedicated to games of ritual sacrifice for an old religion. I went to the edge of town, found an entrance, and crawled inside. I passed many days in exploration, prodding the carcasses of animals in cages, bones I couldn't imagine on any living creature. It was evident, even to my most naive eyes, that something of great importance had been forgotten here. While my grandmother cooked dinner, I pressed her about its origins. She made me an offer: she would tell me stories of the lost empire if I took reading lessons from her in the afternoons. That was more than a decade ago. Now, for the last three months, I have returned to the amphitheater every night to discover its secrets before it is gone.

I first noticed your condition in the third month of your pregnancy, just as the Church set about selling marble from the amphitheater. You appeared bloated and lethargic, and by summer, your face and hands had swollen to the point that you could barely see or stand. The physicians blamed the humors in your womb. They prescribed bed rest and prayer. But from my years as a midwife, I know how pregnancy can steal both mother and child. I have watched too many women die from this affliction, knowing that the doctors that lived alongside this amphitheater had herbs and rituals that could have saved them.

The amphitheater was first dug up, at great personal expense, by one of the noble families whose children I had delivered years before. They used the amphitheater as their private castle for nearly a year, until they were unceremoniously kicked out by the Church's private militia, taken to the town square, and burned at the stake. The townspeople had been required to watch. The daughter's cheek bubbled and burst across her teeth, and the smell of their skin hung in the air for days. Then the Church took the amphitheater as its private quarry and sold its marble to the highest bidders. They will deconstruct it, piece by piece, until nothing is left. They use it to build new palaces, to build a church to rival Constantinople's Hagia Sophia. They melt down the iron clamps between the marble, a precious metal today, but something the Romans had in abundance. They want to be sure we worship their god, and the amphitheater is a monument to a time that precedes their rule.

When I turned twelve, my grandmother showed me the books she kept under the floorboards, which documented the feats of the old empire in three volumes: engineering, philosophy, and medicine. When Rome fell, you see—devastated by an earthquake and then, not fifty years later, a flood—the population dwindled from over a million to less than a hundred thousand people. In only a few generations, we lost all knowledge of how to build the aqueducts, the Pantheon, the Colosseum; how to save a woman in childbirth; even how to speak classical Latin. Three hundred years later, our city remains in disarray, and we live in the shadow of our former empire, unable to make sense of the structures and texts they left behind.

The Church is terrified of the feat of the Colosseum especially: it was built out of two hundred and forty arched galleries four stories high, which curve in a perfect ellipse. When the games took place, protection from the sun was provided by large velarium sheets set in intricate patterns. There were countless ropes and pulleys to control these sheets. In the center lies the arena, bounded by a high wall topped with a protective balustrade so the gladiators and animals could not escape. The Romans used to ship these animals from the farthest reaches of their empire, and set beasts loose no one could conceive of seeing today. When last year an artist came through town with a drawing of a creature from a faraway continent—half dragon, half unicorn, with armor-plated skin and scaled legs—the people turned mad for a day, unable to accept that such a creature exists. But in the time of the empire, these things were transported for sport; they knew how to tame and fight them. They mastered animals we understand only as devil's work.

In my time in the amphitheater, I have come to know it well. The floors have tiered seating: five sections of marble benches, divided by stairs, line the basin. Each section opens onto a vaulted corridor, which connects visitors to the rest of the space. Two marble markers at entrances indicate the section number and the social class permitted to sit there. At the opposite side of the corridors, there pass staircases, which cut through the structure's massive bones. In the corridors there are the archways, which frame the marble statues of Roman emperors and gods and goddesses. Many of these statues have been sold or stolen as collectors' items for the noble families, keeping the pagan monuments as trophies in their estates, laughing at the Church for succumbing to its fear of a dead religion.

Better than any of us, the Romans understood death, and enacted this understanding with the amphitheater: funded by the Jewish War, they built it on top of Nero's Domus Aurea. Nero—the emperor who used the devastation of a city fire to build a private palace, featuring in its central garden a 120-foot bronze statue of himself, as well as a rotating dining room that dropped flower petals from the ceiling. This, from one of Rome's most mad emperors. He would dress up in animal skins and, for personal entertainment, crawl through the streets howling and attacking people's genitals. He kicked his pregnant wife to death and then married a man he'd had castrated. His extravagance shocked the Romans, and the Senate declared him an enemy

of the state. Rather than face execution—their ritual for criminals was to beat them to death, drag their body through the streets on hooks, display it in the city center for a day, and throw them into the Tiber with no proper burial—he fled with four servants. He made it five miles before horsemen caught up with him, at which point he begged his secretary to stab him in the neck. His last words before he fell to his knees on the autumn leaves were, "What an artist dies in me."

But I digress. After Nero's death, the Colosseum became the emperor's symbol of imperial rule. In the confines of its ellipse they had absolute control over life and death: they killed revolutionaries for sport and granted mercy to fallen gladiators. The ancient records tell that a million animals died in this arena; some beasts vanished from the earth forever. The events in the amphitheater became a demonstration of Rome's military might and their patronage of the people. It was a civilization that understood public entertainment could maintain social order. Games played out that determined the victor between courage and prowess, civilization and barbarism. It was a site of ritualized violence, bringing stories of faraway wars and Roman might to the city center, to remind the people that the whole world was an arena.

Centuries of ritual death turned the soil rich with iron: an estimated four hundred thousand liters of blood soaked into this ground. The Romans believed that this earth became a gateway to the underworld; the accumulated energy of the deaths that occurred in one place, contained by the circular architecture of the Colosseum, thinned the veil between worlds. Even now, hundreds of years later, no plants grow in its soil. Virgil, the Roman best known for his poetry, is rumored to have practiced necromancy in the amphitheater. A powerful sorcerer and sage, he also created a bronze fly that kept bugs out of Naples and a magical piece of meat that prevented the food around it from spoiling. They say that this was the place he raised his dead parents, that he built a bath out of its stone that cured them of their illnesses. It is whispered that the three of them are still alive in Naples today. My best chance is to recreate something of his methods. This place of death, if properly channeled, can connect us to the gods. I have guided new lives into this world even as others have slipped away; I know, as did the Romans, how life and death are mirrors of each other. I know the gateway in this arena can touch the gods themselves: even the ones that guide women and children through childbirth. When the moon is high enough to illuminate the arena's floor, at the hour when shadows move against its light, I try, repeatedly, to call upon them. I beg them to intervene.

Once I had her books memorized, my grandmother introduced me to others who studied Roman texts and followed the old religious systems. They met beneath the city, in the remains of Nero's Domus Aurea, which one of them found by following pathways undiscovered by the Church. Some of them were midwives, but there were also stonecutters, astronomers, physicians, metalworkers. By torchlight, these disciples traded herbs, whispered prayers to gods the Church had declared dead, and shared ancient texts—though most Roman writing remained locked away in collections we couldn't access without risking denunciation. For years, I brought you with me, Magdalena. You would sit quietly in corners, watching our exchanges with curious eyes. But as you grew older, your curiosity hardened into fear, and over the summer you told me you would not accept me as your midwife, that I practiced witchcraft. But I want nothing more than to help. We have medicines here that could ease your suffering, rituals that might yet save you both.

A few basic facts the Church wants us to believe about the Romans: that their engineering was the result of divine intervention. The dome of the Pantheon, suspended as if by celestial strings, they call—there is that phrase again—devil's work. They say the indestructible Roman concrete was mixed with blood and sacred eggs and the bronze Colossus of Nero was made through a demonic pact, while the Roman aqueducts were built by giants. Compare these to our crude wooden structures, built out of clay, dung, animal hair, blood, urine—any base material to make the lime bind. The smell on rainy days reminds one of a charnel house; in winter, our walls crack and let in drafts. All while we walk by the remains of those Roman structures: neat, powerful, inimitably symmetrical. Their roads spanned to the edges of the world; their underground libraries were protected with magical seals.

The nobles, in a direct bid against the Church, have declared the fundamental law of Roman virtue: their grasp of classical Latin and its elegant appointments—its perfect grammar, its enigmatic

subjunctives, its indefatigable declensions—molded them into superior minds. They believe that our medieval Latin is the root of our corruption, and if we could just relearn its classical form, we could ascend to their higher planes of thought. We could, like the Romans, use our civilized language to civilize our town; harness the sophisticated language for sophisticated literature; put our structured grammar towards superior architectural engineering. Any possible reason for Roman greatness, they say, comes from these linguistic building blocks we have lost. They build new wings on their palaces to store Roman texts they've directed their guards to steal out of buildings protected by the Church, and rip out what stone they can from the old monuments. They're employing scholars to study the old language and expanding their guards to protect their new assets. It is a total inheritance they seek to reclaim, recreating a city in Rome's image, one that contains all that might be expressed in the grammar of human achievement.

The logic follows thus: perfectly balanced sentences mean balanced thinking. Classical Latin's precision enables precise thought, which will enable a deeper knowledge of agriculture, engineering, medicine, even the arts. Beautiful language enables beautiful ideas. But beauty, if not tied to something more meaningful, remains bitter and shallow.

The promise of a new order seduces the townsfolk, who are tired of living after the end of civilization. Since the announcement of the nobles, the ancient texts are being sold at the market, while old temples are broken into and their books disappear. Everyone feels a duty to unlock the ancient's wisdom through grammar and rhetoric. There is a chance, as there never has been, of becoming someone great. But these new converts are blind to the truth before them, carved in every temple stone, written in the bones of mothers and children in ancient graves. The Romans succeeded because their gods demanded precision in all things—in surgery, in architecture, in the gathering of herbs, in the maintenance of waters. Their religion was not, like ours, mere worship. The survival of our mothers in childbirth is half that of the Romans; our Christian prayers do nothing compared to their precise rituals, antiseptic herbs, and trained priestesses. I have seen the surgical tools of Roman doctors, blessed by Asclepius, and viewed the remains of their healing temples. Our so-called scholars chase Latin declensions while Roman wisdom lies moldering in desecrated temples, their medicines and fourteen different healing goddesses forgotten. They seek the city's redemption in grammar alone, wandering an endless hallway of worthless words, choking on their own eloquence, sacrificing themselves to the abyss of rhetoric while real wisdom lies waiting in plain sight.

Since the time of our grandmothers' grandmothers, the midwives, still under the control of the Church, have rejected the study of ancient remedies. Our order does not acknowledge birth and death as liminal moments that require precise ritual observance, and we lose countless mothers and infants to perils the Romans could have managed. When babies emerge feet-first, becoming trapped in the birth canal, we have only barbaric choices: attempt to turn them manually, often rupturing the mother's flesh and drowning both of them in her blood, or dismember the already-dead infant to save her. She often succumbs to fever days later. The first child I failed to deliver: the mother labored for two days with an obstructed birth, carrying a dead child we could not extract. We resorted to cutting it up and pulling it out piece by piece, but the mother died and left behind three young children. I could no longer accept our ignorance. With my grandmother long dead, I returned to the Domus Aurea alone. I bought medical books from their market and worked to decode their knowledge. In all likelihood their secrets can be recovered; if our current medicines are not sufficient, then the multiform temples of Rome must surely contain the extraordinary knowledge that is required, along with the tools and techniques of that medical art. But when once I offered one of their herbs to a woman suffering from dropsy in her third trimester, the Church's inquisitors came to my door that night. They took these books and burned them, declaring that these "pagan" techniques endangered our souls. Magdalena: I have been banned from your birth, and you refuse to see me before your delivery. The gateway in the amphitheater is all I have left.

Priests denounce the amphitheater as unholy ground, insisting that Roman spectacles were mere barbaric entertainment. From their pulpits they condemn what they call "that devil's circle, where blood offerings to false idols corrupted souls and invited demons into our world." How little they comprehend the sacred science of death! Every

execution in that oval sanctuary followed precise ritual. Before entering the arena, gladiators anointed themselves with oils of cedar and myrrh, reciting prayers to Mercury to guide their soul should they reach the afterlife. Criminals sentenced to death in the games wore red ochre on their skin, symbolizing rebirth through sacrifice, even for those most deplorable. Each drop of blood spilled was collected in sacred vessels by attendants who measured its volume before returning it to the earth. Then there were the meticulously planned spectacles documented in imperial records: "Neptune's Reckoning," where condemned men fought rising waters as sea battles were recreated in the flooded arena; "The Thracian's Final Glory," where a single warrior faced seven bears in succession, each representing a celestial wanderer; "Juno's Choice," where female prisoners fought while midwives attended pregnant spectators in special sections, believing proximity to such courage would strengthen their unborn children. You see, while the Colosseum witnessed so many forms of death, it permitted not a single meaningless sacrifice. Each death served as calibrated communion between mortals and gods. The old gods recognize every form of death—both the calculated end of a gladiator and the desperate struggle of a breech birth. These sacrifices carry meaning beyond the Church's understanding. Every death speaks its own language—a sacred tongue that opens doorways between our world and the realm of gods. To destroy the Colosseum is to silence these ancient conversations, to commit blasphemy against knowledge itself. The Romans understood what our priests deny: that death and birth are twin mysteries connected by this divine gateway.

Each day the Church's workers chip away at the amphitheater while your death moves closer. The civilization we live in is at the edge of extinction: of course they would seek to destroy the one monument that might save us, even though preserving it might mean our salvation. How cruel that the knowledge to save you has already been discovered, used for centuries, then buried beneath the Church's prayers. In the town's poorest quarters, I've met decaying women who whisper invocations to Lucina before births, who mix herbs by moonlight using recipes half-remembered from grandmothers. They inscribe symbols they cannot read on their floorboards, preserving fragments without understanding. Yet the priests burn medical texts while ordering new tombstones for infants. I am not deluded by grief: our greatest inheritance are these old gods, and they slip away with each stone removed from the amphitheater. And yet. These blood-soaked foundations, these sacred geometries—the structure may fall, but the ground remembers what flowed into it.

This is no empty comfort. Those who imagine the Roman's extinction assume that some power—the Church, time, human forgetfulness—could erase what was carved into the very foundations of our existence. This is impossible. The priests fail to understand that the Colosseum's power transcends its physical form. They may scatter its stones, but the energy within them will endure. The mysteries of our future are no longer held in the stars or planets, as the Romans believed, nor in the cross, as the priests insist. Our very bodies are thresholds between worlds. I propose this as the key to understanding our future: the amphitheater is not being destroyed but transformed, its power redistributed throughout our city. If you live, your daughter may walk streets paved with pieces of the Colosseum and touch walls built from its marble. Each generation will rediscover these scattered gateways, reinterpret their meaning, rebuild bridges to ancient wisdom. What the Church believes is destruction is merely redistribution of matter. This cycle of forgetting and remembering is perhaps more sacred than Roman ritual or Christian prayer. In my hours of vigil, I cling to this certainty. The gateways require blood to open. What can a mother offer if not the opening of a gateway for her granddaughter to pass through? I have only one request: give this letter to my granddaughter, so she will understand, one day, why we never met.

Always,
Valentina

Bri Di Monda is the editor-in-chief for the Cleveland Review of Books. Her fiction has been published in Prairie Schooner, Forever, Annulet, Worms Magazine, and The Summerset Review. She is a recipient of the Glenna Luschei Award for fiction and a semifinalist for the American Short(er) Fiction Prize.

CRYPTOBIOSIS, OR

What Will Happen

to All Our Emails

When

We Die

ZACH PECKHAM

so here you might imagine an arrow
shot from a bow and traveling deep into space
at a high rate of speed
so far away now it looks like
slow motion
released from a location on earth
but probably somewhere
let's be honest
in the American midwest
going out and on for lightyears
imbued with importance
carrying a message
a final sign
we once were here
:
all the moms
:

soldiers explorers doctors artists writers musicians philosophers activists pilgrims
city planners politicians MRI technicians
software developers middle school English teachers well-tipped golf caddies
NASCAR drivers sailors child actors magicians' assistants
air traffic controllers managers of Subway® sandwich shop franchise locations
social media influencers DJs event planners arborists telemarketers veterinarians
funeral home consultants hedge fund managers literary critics and dads

:

our memory of having lived

lighting out into ever expanding space

so slowly

:

MAKE MONEY AND CHANGE YOUR LIFE NOW!
WITHIN 5 MINUTES YOU COULD BE MAKING REAL MONEY WORKING FROM THE COMFORT OF YOUR OWN HOME!

:

precious golden arrow

carry us gently to infinity

:

you wake from a dream about the future

you are hungover or have lost the ability to rise under imperfect conditions

hours of sleep, units of hydration, levels of blood sugar and cortisol

in an ongoing state of lack

this requires substantial effort

:

a being may see its life

as a discrete sequence of events

lined up like dominos

waiting to topple

one moment leaning

into the next

after the last

:

this other one might see

a long and gentle arching

beam of multicolored light

to be ridden like a slide

or wild kind snake

:

the geoduck (phon. gooey-duck)
is a giant saltwater clam
with an elephant trunk
overspilling its shell
and no brain or eyes
but prized, see
for its distinct savory flavor
crunchy texture
aphrodisiac side effects
and living as long
as 160 years

:

OPEN NOW TO LEARN HOW TO MEET AND ATTRACT BEAUTIFUL WOMEN! EVEN IF YOU AREN'T TALL, RICH, OR HANDSOME

:

at night

you see lights

flashing in the pines

:

the average human life lasts 79 years

:

the oldest koi fish

lived to 226

:

when are they coming

to get you

:

and so an exploratory committee was formed
and the leaders were pleased
because the readouts promised excellent conditions
for a condo with a patio
beachfront property
saltwater blue
fine yellow light at the center
and all these benevolent marsupials
beautiful stuff carpeting the ground
breathing life into the air
which was also full of all these other things
who were singing and breathing
to each other
about everything else
but then someone on the excavation team
discovered a critical error
an untreatable cancer
had infected the body
and was beginning to spread

:

maybe you see it now

just a glow starting around the edges

:

RETIRE EARLY AND NEVER HAVE TO WORK AGAIN: SAVE MORE AND WORK LESS, IT'S THAT SIMPLE!

:

tortoises are often cited
as the longest living terrestrials
Harriet, giant tortoise
disembarked from Darwin's ship
after the long and harrowing expedition
of 1835
then died in an Australian zoo
in 2006

:

Adwaita
giant tortoise
gift to a British officer
East India Company, 1750
lived vigorously
until his shell cracked
2005

:

today the oldest tortoise
lives on the Island of Saint Helena
stalking the dewy grounds
of the governor's lime green plantation house
blind
with no sense of smell
but very good hearing
193 years old
Jonathan

:

the arrow is slipping

silently through the Kuiper belt

leaving an orange dusted transit path

smoky memories of us ribbon outward

:

or maybe an impression

indentations on a plane made by waves of
vibrating light

trace a shape

:

if each word equals
a pocket of air
that stays inflated
unless it's deleted
is this a marker

:

5 SIMPLE TRICKS YOU CAN START USING
TODAY TO EFFECTIVELY REMEMBER
EVERYTHING YOU LEARN

:

Lin Wang, Asian Elephant, 86 years

Greater, Greater Flamingo, 83 years

Cookie, Major Mitchell's Cockatoo, 83 years

Thaao, Andean Condor, 80 years

Ol' Billy, Horse, 62 years

Andreas, European Brown Bear, 50 years, World's Oldest Bear

:

cows vs. goats

dogs vs. crows

:

mammals have the hardest time

keeping clung to earth

:

but for one exception

homo sapiens

:

Jeanne Clement, b. February 21, 1875, d. August 4, 1997, 122 years and 164 days

Kane Tanaka, b. January 2, 1903, d. April 19, 2022, 119 years and 107 days

:

meanwhile the ocean teems

densely with immortals

:

this may not be surprising

:

Freshwater Pearl Mussel, 250 years

Greenland Shark, 392 years

Icelandic Ocean Quahog, 507 years

Giant Barrel Sponge, 2,300 years

Black Coral, 4,265 years

Glass Sponge, 10,000+ years

:

but it's just not that impressive
when a sponge outlives a human

:

EXOTIC MIRACLE FRUIT BOOSTS ENERGY, IMPROVES LIBIDO AND REDUCES STRESS: CLICK HERE TO ORDER

:

you try to remember a time when you could make it
through a day without some shard of noise
piercing in to strike you with wonder

:

whether you'd made the right decisions
if the path from there to here wasn't
where else you would be

:

you are stuck watching a movie of someone else's life

:

in 50 years
the number of dead people on social media
will begin to outnumber the living

:

by 2100
some estimate the total
profiles of the deceased
at 5 billion
or
the entire population of earth
in 1987

:

much more impressive to think
we have already become immortals
that our selves outlive ourselves

:

when the afterlife is data
a server farm is Valhalla

:

the arrow gliding softly into a tide of oncoming waves
parts them passing in the opposite direction
encrypted chatter mingles with radio static
your credit card number and email address
holding hands with ancient distortion

:

the sky goes dark again
you know they must be there
hanging back
like always
watching us make our go

:

hear them cheering?

:

they're waving big foam fingers and drinking beers in the bleachers

:

if the earth is round it's a ring
for pro wrestling

:

SEAFOOD WELLNESS BREAKTHROUGH: ASTAXANTHIN ACTIVATES THE FOX03 'LONGEVITY GENE'. THE TRUTH DOCTORS DON'T WANT YOU TO KNOW

:

seamonkeys and nematodes
waterbears and brine shrimp
roundworms and tardigrades
stop all their metabolic processes at will
should conditions become imperfect

:

levels of water and oxygen
toxicity and temperature
environmental solute concentration
falling out of balance
into a state of lack

:

brine shrimp, roundworms, tardigrades
just stop themselves from living
and pick it back up later
when the timing is better

:

turritopsis nutricula
a small hydrozoan
the "immortal jellyfish"
passes repeatedly backward
into earlier stages of its lifecycle
changing one cell into another indefinitely
rendering its potential lifespan infinite

:

how imperfect
can conditions get

:

WANT TO TRANSFORM YOUR BODY FROM FAT TO FIT?
NOW YOU CAN! OPEN NOW TO CREATE THE BODY
YOU'VE ALWAYS WANTED

:

what if

they've already been here

:

looked around

shrugged

and left

notes.

Facts about humans, animals, space, earth, and the Internet are casually and superficially researched and sourced from search engines and Wikipedia.

Text in all caps is an assemblage of spam email subject lines and pay-per-click advertising language.

The golden records aboard Voyager 1 and 2 were launched into space in 1977, exited the heliopause to interstellar space in 2012, and are still in transit.

Zach Peckham is a writer, editor, and educator. He runs a small press called Community Mausoleum and a journal called Coma.

The Garden of Earthly Delights

APRIL 3, 2023. THINGS FALL APART. Not Bryan Johnson though — not today anyway. Today he is with his father and son at a nondescript medical clinic in the Denver suburbs, preparing for what he claims will be the first multi-generational plasma transfer.

Infusions of plasma from young healthy people appear to have potential anti-aging benefits, and today these hopeful plasmatic benefits will be siphoned upwards through the family tree from son to father to grandfather. In a fluorescent-lit room with taupe knockdown texture walls, Johnson's son Talmadge reclines with his arm splayed on a padded rest, plump vein rubbed with iodine by a med tech. The vein is pierced. The blood flows. "One liter out," says Bryan, pointing at the tube of ruby fluid snaking from Talmadge and towards the centrifuge where the plasma will be spun out. "Then one liter in for me, one liter out from me, and one liter into dad." The circle of life.

"I won the lottery," his father Richard says. "There has to be a benefit in getting this much volume of him."

So much volume. So much of one being supped by another (*Each of you drink from it, for this is my blood*, Matthew 26:28). The mood in the room is charged with something strange and ecstatic. As soon as the final milliliters of Johnson's plasma flow into patriarch Richard, Johnson and grandson Talmadge hoist him to his feet and envelop him in a three-way hug. Three men, previously estranged from one another through divorce and religious trauma, are brought close again through this fluid intermingling. The trinity reunited. Later, narrating to camera for his YouTube audience from one of the many echoing chambers of his large empty house, Johnson explains that this transfer of volume obliterated the interpersonal barriers that kept them apart: "we were divided by the mind, and we were unified by our biology."

This day was a beautiful one-off. On the internet, you'll still hear Johnson referred to as "the guy who uses his son as a blood boy" which is a good joke that Johnson himself encourages. Plasma exchange is conceptually (and memetically) powerful. However, some months after family day at the Denver clinic, Johnson announced on X that no clear benefits had been detected from the plasma treatment. Consequently, he would cease the protocol. Never again was the blood trinity assembled. Johnson moved on to other experiments.

—

BRYAN JOHNSON, as you probably know, is a rich man undertaking a series of improbable and experimental treatments in an attempt to slow or reverse the physical markers of aging. After an early adulthood of overwork, depression and bad habits, his goal is now to live forever. Actually, his goal is "Don't Die" ™. Don't die now, don't die tomorrow, don't die next year, or the year after that. If you string along enough days of not dying, eventually you're living forever. Certainly something is happening with his corporeal form. At age 47, after three years of Don't Die experimental treatments and an austere and predictably White-wellness-coded low-calorie diet, he has the appearance of a well-preserved cosmetic surgeon or a Nexus-6 pleasure model replicant.

For the most part, Johnson treats his body like a closely-guarded and obsessively monitored system that can be endlessly tweaked and iterated and formalized into

a "Blueprint"™. Every action is guided by the information extracted from his fluids and reflexes, the data trusted above any subjective sensation or bodily desire emanating from his fallible brain. He and his adherents display an almost erotic, devotional attendance to their own viscera. How are the fluids looking? What can be foretold from the rumblings of the kidneys? In this constant loop of biometric feedback and tweaking of inputs, Johnson and his team seem to have developed from first principles a kind of cybernetics of the self. "That's what the power of this approach is," writes Johnson in his self-published book *Don't Die*. The ability to optimize the body "through algorithm alone, without letting the pesky mind get in the way — not because it's necessarily harmful but simply because there should be a way without it."

In the context of the rest of his bodyhacking, the plasma experiment was counter to Johnson's usual Don't Die methodology. Don't Die is a system of the self, a set of practices and systemic interventions that shore up the individual's boundaries rather than extending them. Of course, despite its transcendent moment of interpenetration and interpersonal regulation, the family transfer still engaged with many of Johnson's usual tropes including relentless self-promotion, under-regulated private clinics, and controversial medical techniques.

Still, to me the son-self-father transfer remains the most interesting thing he's done — incredibly romantic, kinky even. What could be more intense than to take in the fluids of another in the hope it will change your life? A blood purification ritual that is also a contamination. Johnson has experimented with a range of plasma transfer protocols before and since the three-way experiment, but these were always unidirectional. This is the norm for the Silicon Valley young plasma enthusiast, who considers blood a commoditized product, alienated from its source and flowing in one direction only. In that brief moment of the intergenerational transfer, Johnson showed a willingness to expand the boundaries of his tightly-held body. Not by becoming eternal (the individual body extending through time) but by connecting to a collective body (the conjoined body expanding through space) and taking a leap into inter-corporeal circulation.

—

I'M NOT THE ONLY FREAK with a dream of collective circulation. In Alexander Bogdanov's 1908 Russian sci-fi novel *Red Star*, the human narrator describes visiting a utopian Martian society whose incredible vitality and longevity is due in part to the physiological bond formed through health-giving inter-generational blood transfusions. These transfusions represent a "comradely exchange of life that extends beyond the ideological dimension into the physiological one" — a line echoed almost exactly by Johnson over a century later ("we were divided by the mind, and we were unified by our biology").

Bogdanov was a physician and a revolutionary before he was a fiction writer. The worlds described in *Red Star* and its prequel *Engineer Menni* were

more than speculation. They were an expression of his politics and a blueprint for a real-world intravenous communism he later attempted to actualize through his own pioneering transfusion work, including at the Institute of Blood Transfusion he founded in 1926. While transfusions of human blood had been practiced with various degrees of success since the 1810s in order to preserve the lives of people suffering from injury or hemorrhage, Bogdanov believed that the exchange of blood could do more than keep people alive. As he understood it, blood is a complex "living tissue" that has an enormous organizational role in the overall health of the organism, embedded with infection-fighting leukocytes, hormones that regulate the metabolism, and other vital elements that reflect the overall health of the body through which it circulates. Therefore, he hypothesized that young blood, bearing as it does "materials taken from young tissues," would be able to help an older body and regulate some of the decay and disorder of age, imbuing the recipient with desirable attributes of the donor.

Bogdanov's belief that young blood could revitalize the old body was part of a broader theory that the process of aging was not inevitable or wholly necessary. In this way, he was a precursor to Bryan Johnson and his obsessively-honed Blueprint for extended life. However, unlike the mainstream crop of Silicon Valley longevity enthusiasts, Bogdanov's theory of life-extending blood transfusions reached its ideal form in mutual or inter-communal transfers, beyond the individualistic charity (or financial coercion) of the one-to-one transfusion.

In his essay "The Tectology of Struggle Against Old Age," he posits that not only would the old benefit from the blood of the young, but that the blood of older people would likely also benefit the young, offering "elements for evolution" or age-related immunities to childhood diseases. The mutual transfer, "a simultaneous, interchanging transfusion from individual A to individual B, and from B to A, with neither one nor the other sustaining quantitative losses of blood," is where the true benefits of blood-sharing come into effect. Bogdanov imagined that an ongoing, community wide network of blood exchange would vivify and enhance the entire population: "the broadening of life here depends generally on going out beyond the limits of individuality." This is the expansive notion of inter-communal circulation that Johnson's intergenerational plasma transfer hinted at: a communism of the blood.

"THE FLUIDS GROW SEPTIC AND THE BLOOD FLOWS WEAK"

This eccentric systems approach to understanding social health was part of Bogdanov's large-scale theory of "tectology" — his term for the study of the regulation and organization of all systems, with the goal of preserving stability and optimizing systems (through collectivized labor and production, naturally). Essentially, an early version of cybernetics. In *Red Star*, the Martian society runs

using an elaborate process of information control and feedback, computing machines, and regulatory mechanisms — a model for the kinds of lossless systems which would enable the maintenance of social, bodily, and global equilibrium. For Bogdanov, health can only be collective. Ecologies and bodies alike fall apart when the actors fall out of sync or when one element is allowed to run too long in isolation, creating (per Marx) a kind of metabolic rift.

As a communist and a theorist, Bogdanov was deeply concerned with systems and relations, and he was quick to draw analogies between forms of social organization and the function of organisms. In his writings, notes the scholar Douglas Greenfield in his analysis of Bogdanov's novels, "sociology informs biology."[1] In the reality of blood and viruses and immunology, this is not always the case. But while Bogdanov's scientific theories are certainly a product of their time and his social theories closely informed by his political commitments, he was right about many things: the interconnectedness of all beings and systems, the exciting permeability of our bodies, and the need to re-regulate the metabolism of the social body and the planet.

The body-world's dysregulated metabolism is a problem for today's life-extension enthusiasts. The industrial production of steel and plastic bags and ASOS blouses adds carbon and pollutants to the atmosphere, diminishing air quality and accelerating the warming of the climate. Romaine lettuce farmed in Santa Barbara County near animal production facilities and irrigated with contaminated water leads to E. coli outbreaks in Ontario and New Brunswick. The fluids grow septic and the blood flows weak, diminished by parasitic human activities as the greediest of our kind suck, tick-like, on the planetary veins. Even if you stack your nootropics correctly and optimize your sleep cycle with all the care in the world, there is no escaping the fact that the materials that compose the body's fluids and meats originate from somewhere outside ourselves, subject to the pollutants and influences of the wider environment. The systems of the planet and the systems of our bodies necessarily intersect, and the sickness of the world comes home to roost. The body is a world: a planet in microcosm, or in metaphor.

Is blood a metaphor? I've come this far mostly without stepping over into the figurative, just teetering on the edge of blood's describability and its literal existence. But blood is so turgid with history and symbolism that a slip into metaphor feels like a pulsing inevitability. Every vampire sodden with sex, death, the idea of Europe. Every bleeding man a possible Christ. "Drink from this cup for it is my blood" (the gospel of Matthew laying it plain). In every drop a threat of contagion, in every drop a possibility of eternal life. What is blood if not a metaphor?

And yet, the thing I admire most about Bogdanov's blood-thought is its literality. The Martian blood transfusions described in *Red Star* are not (or certainly not exclusively) a metaphor for socialized systems of labor and distribution. They are in fact blood transfusions, literal blood piped from vein to Martian vein.

The collective body engendered by this society-wide system of transfusion is also a metaphoric one, but the mechanism of its formation is very real. Bogdanov applied this commitment to inter-embodiment to his own life and circulatory system. In the course of his transfusion research, Bogdanov underwent at least eleven successful transfusions himself, which he claimed resulted in an improvement in his eyesight, a reduction in balding, and other positive outcomes. In his blood work, he practiced the belief in the simultaneous mutual transfer, and eventually perished from it: after an inter-communal transfer with a young student suffering from malaria and tuberculosis, Bogdanov had a serious post-transfusion reaction and died. The negative reaction was likely due to an unexpected antigen response unrelated to the student's malaria and tuberculosis. Still, Bogdanov's death highlights the inherent risk in experimental inter-corporeality and bio-solidarity, especially in those early and hasty years of transfusion science. The student, on the other hand, eventually made a full recovery from his illnesses. For Bogdanov, true comradeship required both political and biological transformation via a dissolution of individual boundedness, and a dedication to exploring what the social body can do.

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JUST AS A CONNECTED BODY can be forged through communist commitments, it can also be forced through violence. In Tom Six's 2009 film *The Human Centipede*, an inter-corporeal body is imposed upon its subjects by a crazed and evil surgeon obsessed with the idea of a multi-body digestive tract. The surgeon, who formerly specialized in the separation of conjoined twins (or so he claims), is now fixated with joining what was previously separate. After capturing three victims, he surgically connects the anus of each person to the mouth of another, creating what he calls "a Siamese triplet connected by the gastric system. Ingestion by A, passing through B, to the excretion of C." This is the long and the short of it — the plot, the premise, the high concept gag. This human centipede, however, in no way constitutes a multi-person gastric system. Imagine it! Imagine a single mouth in front, an esophagus stretched down to somewhere below the belly of the first person, down again to a second person whose interior is all stomach, to the final person comprised entirely of intestine and rectum. This is not what the mad surgeon presents, nor the film. Instead we are given three digestive systems sutured end to end, with a little ass-to-mouth between each to entertain the teenagers. There is no interest in distributed digestion, the strange capabilities or frailties of the human bowel, or even the psychopathology of the man obsessed with its creation. It doesn't take its convictions seriously, nor its anatomy.

In this perverse counter to Bogdanov's horizontally networked organism, the human centipede is entirely linear, each segment connected clumsily to the one ahead. Linearity is central. The human centipede is about the violence of the segment. In her essay "Violence and

the Diagram; Or, The Human Centipede," Eugenie Brinkema describes the crude diagram the doctor draws of the human centipede before he enacts it surgically. What this diagram illustrates, she posits, is "an enchainment in a specific sequence. The diagram formalizes the fact of being riveted, stitched and sewn, to an inescapable finitude, one's own and that of others who precede and come after the self." The diagram (which necessarily breaks things apart, describes the pieces) is itself a form of violence, which is later enacted on the flesh. It is a violence of coercive social relations, imposing a maladaptive linear metabolism on every person in the system (the linear economy made literal: take-make-waste). There is no room to provide aid in the human centipede, no room to recombine or reorder the chain, no room to collaborate. No room for horizon or horizontality. Only the violence of one segment forced to digest the shit of another.

The terminal end of the human centipede's linear logic can be seen in *The Human Centipede 3 (Final Sequence)*. The setting is a prison, and the centerpiece is a giant human centipede made up of all the prison's inmates, an arrangement dreamed up by the psychopathic prison warden as the ultimate deterrent to crime. In the segmented world of the human centipede, pollutants and toxicity are intensified throughout the chain and imposed onto the lowest of the low. That is, shit always runs downhill and forced connection is punishment and death. Where the trans-venous organism of blood communism is premised on free and non-hierarchical exchange, the human centipede demonstrates (per Brinkema) a model of violence "that is constitutive of systems and structures to which one is inescapably riveted." The horror of our world.

Clearly, fluid exchanges and bodily experiments can be coercive or cruel as easily as they can be liberatory or expansive. *The Human Centipede* is fiction, but the subjugation of *HS3*'s prisoners appears only two steps away from the vicious spectacles of "crime deterrence" we've seen broadcast from El Salvador's CECOT prison — deportation and illegal imprisonment being "one of the tools in our toolbox" according to the depraved carceral imagination of US Homeland Security Secretary Kristi Noem. Nazi doctors experimented on over 15,000 documented concentration camp prisoners — including by transfusing blood and sewing twins together to create conjoined twins — killing many of their victims and permanently injuring most of the survivors. The "father of gynecology" James Marion Sims performed painful experiments without anesthesia on enslaved Black women while other doctors observed. *The Human Centipede* may be bad science fiction with a constrained digestive imagination, but its experimental bodily punishments can be seen in our real and recent history from slavers to Nazis to maximum security prisons.

The life extensionist biohacking of Silicon Valley's young plasma crowd exists somewhere between the fluid interchange of the communist Martian horizon and the deranged linear cruelty of the human centipede. The fluid economy of the hu-

man centipede and the Nazi surgeon are entirely linear and hierarchical, a unidirectional flow that is pushed downward onto its subjects, enforced by the literal violence of the despot and the symbolic violence of the economic structure. The Silicon Valley longevity enthusiast also participates in a unilateral flow, with fluids and their metaphoric equivalents (money, power, resources) sucked only inwards in a many-to-one arrangement, only extracting and never reciprocating. In general, the flow of fluids and resources must be commoditized before it can be absorbed through this dry and insular process. The cold violence of extraction, the refusal to participate in reciprocal exchange. Bryan Johnson in his hyperbaric chamber, sucking on oxygen. Bryan Johnson injected with 300 million young Swedish bone marrow mesenchymal stem cells.

Bryan Johnson, eyes welling as he watches his father's body absorb a liter of plasma from his son, his self. I remember! It was, however brief, a moment of intercorporeal possibility. That moment feels far away now (Bryan has since moved on to hawking supplements and collaborating with Balaji Srinivasan) but it represented an alternate path for life extensionists: a kind of biohacking that understands all bodies as interconnected with one another and entwined with the systemic function of the planet. To hack one is to hack all.

There is danger in connection (as Bogdanov experienced when he transfused the blood from the young malarial patient), but there is also danger in the segment, and in imagining yourself removed from the metabolism of the world.

One day, Bryan Johnson will die. This I know for sure. One of his causes of death will be exposure to the world, the same world he lives in with the rest of us. Bryan: even the very rich are subject to the ruin of the planet, even when it was they who conducted the ruination. Why die alone? Why not give yourself permission to be a body that opens up horizontally, to bring all into its system. To understand yourself as part of this system is to take other circulations seriously. Regulate yourself and your comrades (start sharing plasma). Regulate your relationship to the planet (start drawing down carbon). Reopen the vein, so we can all survive for a while longer. ■

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The Right to be Forgotten

Nika Simovich Fisher

In September, my colleague and friend called me out of the blue. He said that he wasn't sure he wanted to tell me the news, but he knew that I had a relationship with the person he was calling about, and thought that I should know. Our shared friend took his own life.

I was stunned. I repeated his first name. Then his first name followed by his last with a question mark lingering at the end. "Yeah." My colleague confirmed. He committed suicide and is gone forever now.

It was a situation I never anticipated. Perhaps that's how it always is, my colleague said on the call before we went our separate ways for the evening.

I thought about the friend who had passed away often. His LinkedIn profile was one of my many tabs in Chrome just a few days ago. I was considering reaching out and inviting him to be a guest speaker in the class I teach, but decided against it, thinking I hadn't heard from him in a while and he was probably busy and maybe didn't want to hear from me.

The LinkedIn page was gone now. That was what I looked for first, after the initial slap of shock and sorrow settled a little. Then his X account, which he didn't really use but was no longer there just the same. And his Instagram account too: gone. There, our message history still existed— our last exchange was a couple years ago (actually, three years ago exactly from this date when I'm writing), when I sent a photo of a project we worked on a decade before during my first job after graduating college. "Hahah blast from the past. Hope you're doing well!" he said, and I hearted it. At that point, his screenname was still present but the avatar was missing, signs of the first phase of account deletion.

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In the movie *A Ghost Story* a recently deceased man returns as a ghost (covered by a white sheet with two holes cut out for eyes) to his home and travels through time to see the history of the physical location. We see it when he inhabited it as a suburban home, in the future after it gets demolished and replaced with an office building, and back in time when it housed its first inhabitants. Throughout the film, the protagonist seeks closure in his relationships, but he also seeks traces of his home within the plot of land. There is a scene where a note is left in the walls of his house; he tries desperately to claw it out, but is only able to do so once the walls are destroyed and the house is left in shambles. Even then, he's unable to read the message.

If *A Ghost Story* shows the impermanence and opacity of physical memory, then our digital remains suffer from the opposite fate. When most people die, their data continues to sit online accumulating digital dust for as long as possible. Instagram profiles lie unmoored with the last photo uploaded sitting earnestly in the feed as though nothing happened. WhatsApp chat histories stay in the archive until the recipient clears the cache. These relics become tiny memories, like an old garment that still carries the fading scent of its own-

er, quietly present, but rarely clicked on, and pushed aside by newer distractions that arrive higher in the feed. They also become data and currency for the host companies that hold on to these remains until they themselves shut down. And then? Our data is up for grabs, as was the case with the recent bankruptcy of the DNA website 23AndMe.

The data we produce while on these platforms is meant to provide a sort of window into who we are, even if it's incomplete. The default is to keep it up for the value this knowledge provides to those looking to leverage it for profit, rather than its sentiment. In life, erasure is a sort of luxury. In death, some platforms, like Meta or Apple, allow users to appoint a "Legacy Contact" to manage their accounts. Without that however, the law tends to prioritize the "privacy" of the deceased, making it difficult to remove anything from these accounts posthumously. Which is why my friend's methodical erasure felt so deliberate, something like a quiet resistance to being flattened into a shoppable data point.

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My friend was a designer and developer working at a large tech company that you'd know about. He used to be a professor of Communication Design, though he no longer taught. That's how we met back in 2012. I was a student in his class, the first year he started teaching after finishing an MFA in graphic design.

He taught Core: Interaction, which was an introductory web design class. He spoke about design and code thoughtfully, in a way that made you care about it. He was able to encourage you to present your ideas with confidence, and encouraged us to see the web as a place for self-expression and independent publishing.

One assignment was to create a typeface made entirely out of HTML and CSS with no images. "Why would you ever do that?" I questioned, in a somewhat obstinate way. I didn't understand the point. At that time custom web typography was nascent. Instead, almost everyone used websafe fonts like Arial and Times New Roman. "Why do you do anything?" he retorted.

His point, albeit indirectly, was that you had to make something interesting to yourself to give it meaning. And I did just that. I made "Utopia," a display typeface inspired by De Stijl artworks; then, using those letterforms, I recreated some of those paintings in the web browser— a sort of naive comment on whether the internet still had utopian ideologies, like artworks from other eras, and if the browser itself could be an artwork.

Early in design school, many students will try to recreate things that they've seen before, like a portfolio website or a social media interface. The prompts in this class required more vulnerability and authorship, a deeper look into your own interests. The other two projects in his class asked us to create a visual narrative (which I did by building an archive of all of my clothes, organized by how you remove the piece),

and to republish the index of statistics from *Harper's Magazine* into a new, interactive format (for which I compared the printed stats to what was being said about the same topics in real time on Twitter).

Yet the alphabet project was uniquely difficult because it required the form itself to express the concept. These letterforms emerged only when I recognized how the restraints from the tool— that it was easier to create straight horizontal or vertical lines, that I had only so much knowledge and control over the code— were always already shaping the product. The experimentation led me to reflect on how latent ideologies were present in every detail online. My typeface project became a way of carving out that thought visually, a self-portrait rooted in interior ruminations.

His course taught me that something can be personal without being autobiographical or excessively ornamental. What you write or design about, the words you use, the order and structure of your work say more than describing something in an exaggerated way ever could, and they invite a participant in by adding curiosity. He encouraged us to think about why we were interested in the things we were interested in, and to use our personal anecdotes both to fuel our creative process and present our work. These lessons stayed with me throughout my design and writing career, and I imbue it to the students I work with today as a full-time faculty member of the same school we met at.

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In addition to the more obvious platforms out there, I looked him up on Goodreads in the days that followed his death—not because I knew for certain that he had an account but because I wanted to see if there were other, less common destinations he had forgotten about.

In recent years GoodReads, the platform for rating and storing information about books you've read, has become a popular source of fulfilling curiosities. Take the case of Luigi Mangione, the 26-year-old suspect in the murder of Brian Thompson, the CEO of UnitedHealthcare. Partially due to his physical appearance and his conviction to the cause, online fans considered him something of a folk hero and were inspired to look him up to find out more about him. When they found his Goodreads account, Redditors had a field day analyzing his descent. "We love a literate king" one responded to a post stating that he took the book title *The Bullet Journal Method* literally.

While I couldn't be sure that I had found my friend's account, I noticed a curious profile that had listed a book that looked like something he would read. Plus, his name wasn't that common. When I looked at this account's recent activity, I noticed several concerning books stored in the "Want to Read" section: books titled *Last Summer in the City*, *In Memoriam*, and *The Last Lecture*— which was about a college professor who was recently diagnosed with terminal cancer and had to deliver

a final class at the university he taught at. I remember feeling spooked by these details. Since then, though, the GoodReads account added a location (which wasn't New York) and logged in several times. It wasn't him.

The ways our minds form meaning and connections is heavily shaped by our emotional state, but this can quickly become problematic. Perhaps it's why my friend wanted to control his level of disappearance, to resist such imposed narratives. In the book *Resurrecting the Black Body* author and archivist Tonia Sutherland writes about the Pepper's Ghost illusions used to have Michael Jackson and Tupac Shakur perform posthumously. At the 2014 Billboard Music Awards, Michael Jackson performed the song "Slave to the Rhythm," despite never having performed that song in real life. "As a human being and as an artist, Jackson experienced death only to be reanimated as an echo, a version of himself that was (re)constructed both as a means of extending profit margins and for the satisfaction of the spectacular white gaze," she wrote.[1]

Like those celebrity holograms, the mental illustrations we craft on Goodreads and elsewhere have little to do with the actual person and more to do with satisfying our own need to know. The projections vary in scale and audience, but the impact is more or less the same. It can be alluring to translate these digital tracks into a coherent narrative that matches our memory— but it isn't. It's just the only thing that's left.

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It seemed he was methodological with removing himself online, clinical even. The social media profiles where we were connected were all neatly removed, even if the message caches lingered a moment longer. When he passed away, there were few tributes on social media and the ones that existed acknowledged explicitly that he wouldn't have liked posts being created online about it. He was private and discerning, and even his most casual peers knew that. This is also why I've avoided naming him in this piece.

"It can be alluring to translate these digital tracks into a coherent narrative that matches our memory— but it isn't. It's just the only thing that's left."

As sociologist Ruha Benjamin describes in her article "Informed Refusal: Toward a Justice based Bioethics," in medical studies, choosing not to participate is an act of agency and resistance. It's a way of seeing "a vision of what can and should be not only a critique of what is."[2] She writes that without this form of agency, participants are often pressured into deferring to authority. The same can be said online, perhaps, and my friend's erasure was a way of resisting that default response.

One page that persisted, though, was his personal website. The website was still there when you wrote his first

and last name followed by .com in the URL textarea. When I opened it up, it felt like he was still alive. There was no change to it. He had designed and coded the site himself using the same lightweight approach to HTML he taught us in the classroom. The website was professional and focused on his work, but the custom interface details were so distinctly him. The dark grey square with a lighter grey circle centered within it in the favicon, how the buttons smoothly increased in scale when you hovered over them. There was control and restraint, but still a sense of an individual guiding the experience visually. It reminded me of his own work both in the class and at the design studio we would both work at once I graduated. Subtle, intentional, and persevering.

His own authorship of removing his social media profiles seemed like a way to control how he was remembered, and leaving his site up was not an oversight. It was as though this was a way of leaving a piece of himself behind, trying to control how he was remembered and archived— a final designed place in his own voice, a way of lingering online with intention rather than being abstracted into a tech platform's memorial template. Someone else's, or rather, a company's, visual language. Ick.

The decision reminded me of another musical artist that had been the subject of a holographic posthumous experience, Ryuichi Sakamoto. At The Shed Museum, an augmented reality performance titled "Kagami" (which means mirror in Japanese) allowed participants to don headgear and see Sakamoto playing a grand piano. It was stunning. As you walked around the space the floor would appear to dissolve, presenting a galaxy, making it seem like you were in space. This performance was different in nature from the forced resurrection of Tupac and Michael Jackson because Sakamoto filmed it in collaboration with Tin Drum while he was alive. Death was imminent because he had been diagnosed with cancer, and the piece was an act of authorship, an extension of his creative practice that let him persist a little longer.

So too with my friend. For a while after death, the website stayed up in its pre-death form. It existed quietly and confidently with a customized visual language— his own version of a final performance, leaving his mark online a little longer than his body would.

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About two months ago, the website content got deleted, leaving only the custom shade of grey background that was there before with no imagery or text. Now, the URL appears to have been purchased by a Russian casino website, offering no hint at what was there just weeks before. As Wesley Aptekar-Cassels points out in their blog response, "How Websites Die," "the closest you might come to seeing signs of this cycle is witnessing the birth of a new website."[3] My friend's final choices to remove his social media accounts but maintain his website were both acts of authorship that allowed us to see this cycle of digital death and repropagation

take place.

After seeing his website replaced, I revisited it on the Wayback Machine. I found versions of his site I remembered being online in the time that I knew him, as well as ones that predated that period. My favorite version of his website is from 2009. It has different blocks of content that he wrote little moments of prose for. The website is tied together with jump links that take you to different parts of the page at random. There is even a Flash player that was intended to link to a YouTube video of Van Halen's "Jump" as a sort of playful note on the navigation.

At the end, he wrote:

"This website is an experiment in experience. As time goes on more modules will be added, creating a more densely populated grid. The point is not to see everything, nor is there a particular order to any of this... I am interested in creating interactions for the viewer; interactions that asks the viewer to think critically about what is being presented to them. You've probably noticed that there is no navigation for this website, at least in the traditional sense. Instead, you are left at the will of randomly generated content. Perhaps Jump by Van Halen is playing in the background right now and you are combing your way through the site via the "Jump" links provided. Or, perhaps another song is guiding you through this experience. Either way you are at the hands of computer generated randomness. How ironic is it then, that this website encourages a more interactive experience than that of one with choices?"

The experience you had exploring his old site allowed for spontaneity and projection. Maybe by leaving his later website up— the grey, buttoned up, professionally focused one— and letting it expire on its own, he was leaning into that feeling again. Rather than be flattened into a stagnant post on Instagram, he had left something that would also change and evolve, and in doing so require you to read between the lines and make your own conclusions. Like his old site, the experience was at once super customized, and displayed both a combination of control and the lack of it. It left space for the viewer to create something new, for randomness to lead to an impression. One final breath before a Russian casino moved in, leaving a fossil for the next person with the same name to discover.

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The Afterlives of Computer Art

Art, technology and attention at the Tate Modern

Celine Nguyen

I entered the Tate Modern's *Electric Dreams: Art and Technology Before the Internet* exhibition looking for computer art. But the most compelling work in the exhaustive fifteen-room show was a low-tech sculpture made of wood, nylon, and a motor. *3069 White Dots on an Oval Background*, made in 1966 by the Belgian sculptor Pol Bury, was a wall-mounted wooden oval with tufts of brushy nylon wires emerging from it. Next to it was a note that read *This work stays on for 30 seconds then stops for 30... The movement is very subtle*. Two museum-goers conferred: "Did you see anything?" Apparently not. "It must be broken," one announced, departing. I stayed and waited. Then: a barely perceptible shudder through the wires, like an insect scuttling through tall grass.

Works like Bury's discreetly invite attention, instead of demanding it. And they recall a time when working at the intersection of art and technology was a physical affair—involving motors, gears and circuits—not a digital, dematerialized one. *Electric Dreams* wasn't, strictly speaking, an exhibition of computer art. Instead, it showed how the twentieth century was shaped by computing and cybernetic ideas, even if artists weren't sitting in front of a screen.

Indeed, many of them couldn't: the first computer with a monitor appeared in 1973. *Electric Dreams* began its chronological survey in the '50s, when computers were room-sized monstrosities used for military and scientific endeavors, not art. Ben Laposky's *Electronic Abstraction 4* (1952), with superimposed wave-

forms, twisted and glowing on a cathode-ray screen, may look like today's Processing sketches, but it was made on a voltage testing instrument, not a computer. The situation hadn't improved much by the '60s, when the computer scientist Leslie Mezei lamented that "No facility exists...where artists can work on a regular basis at an 'art machine.'" The earliest computer art was made by those whose day jobs let them encounter and experiment with computers.

Electric Dreams included three works by Hiroshi Kawano, a philosophy professor who learned to program at the University of Tokyo's computer center. *KD 29* (1969) is an exuberant composition of teal, fuchsia, cerulean, and yellow blocks, thickly outlined in black. It's part of Kawano's Artificial Mondrian series: pseudo-random compositions generated with a computer and hand-painted with gouache. The abstract expressionist Robert Mallary's *Quad III* (1969), one of the first sculptures designed with a computer, was another mainframe-era work that was computationally designed and manually produced. Mallary wrote a program to generate the size and shape of the sculpture's thin plywood layers, and then assembled them into a tall, vaguely humanoid form. The sculpture's polished figure, with the vertical slices forming a head, neck, chest, and hips, is reminiscent of contemporary 3D-printed works.

Two of the most mesmerizing works were made by engineers turned artists. For Wen-Ying Tsai's *Cybernetic Sculpture: Square Tops* (1969), thin metal wires, suspended vertically and gently vibrating, shimmered in a dark room as a strobe light flickered on and off. The strobe's frequency was controlled by a microphone attuned to the voices and footsteps of museum-goers. Tsai had encountered strobe lights in engineering school, but it was only after he quit his day job (as an architectural engineer for Bauhaus pioneers Mies van der Rohe and Walter Gropius) that he turned away from traditional paintings and embraced technological art. Vladimir Bonačić also trained as an engineer, and headed a cybernetics lab in Zagreb. Electric Dreams presented three of his sculptures, made in 1969: large aluminum frames, with lights arranged in a sparse grid and custom hardware and software inside. Pressing down on a foot pedal activated a rapid, dazzling sequence of lights. Bonačić, who was skeptical of the artistic utility of pure chance, modeled the lights after Galois fields, an abstract algebraic concept

"COUNTER-ARCHIVAL PRACTICES WILL ALWAYS BE NECESSARY."

often used in cryptography.

The later rooms included works made entirely with computers, like Suzanne Treister's *Fictional Videogame Stills* (1991–2), which was created on the Commodore Amiga 1000. Her cheerfully garish, pixelated landscapes—with '90s-era system alerts superimposed over them—are rendered in authentically Y2K colors and low-resolution edges. Because the original files were stored on corrupted floppy disks, *Electric Dreams* resorted to a reproduction: Treister's photographs of her computer screen, scanned and digitized. Newer digital artworks are, it seems, more vulnerable to decay than the older, self-contained sculptures by Tsai and Bonačić.

Some recreations, however, improve upon the original. I entered the room devoted to Carlos Cruz-Diez's *Chrominterferent Environment* (1974–2009) to see striped lines, spring green and yellow, projected on the white walls. Enthusiastic children and performatively listless adolescents congregated here. The lines distorted as they draped over the white cubes and inflated balls scattered throughout the room, ready to be pushed, kicked, and rolled. This *Chrominterferent Environment* was a recreation of Cruz-Diez's original work—a recreation that showcased technology's advancement, not degradation. Cruz-Diez first installed this work at a Venezuelan art museum in 1974, using a slide projector and 35mm film painted with gouache. But he couldn't achieve the chromatic complexity he wanted. Decades later, his son helped him recreate *Chrominterferent Environment* with high-definition video projectors and code. The result was arguably more original than its predecessors, and more accessible to audiences in the present.

The exhibition's greatest weakness—an overly broad scope—was also its strength. Most histories of computing are situated in Bletchley Park, Geneva, Palo Alto, and Boston; most art histories, in New York and London. But *Electric Dreams* insisted on an international approach—and, in doing so, shed light on the vital work happening in places like Zagreb. From 1961 to 1978, the city was home to the avant-garde New Tendencies movement, which included Bonačić, Kawano, Mezei, and others. Yugoslavia was a socialist state, but its non-aligned status during the Cold War meant that the arts could develop "free of ideological state interference," as the Austrian curator Armin Medosch observed. As a result, New Tendencies could bring together a multidisciplinary, multilingual group of artists from the East and West. *Bit International*, the movement's

magazine, printed each article in two languages: Croatian on the left, and another language (typically English, French or German) on the right.

In the end, New Tendencies produced five exhibitions, one symposium, and eight issues of *Bit*. It brought together artists and intellectuals whose projects were often illegible to their contemporaries. Critics tended to be hostile to early computer art; it was, as the art historians Hannah B. Higgins and Douglas Kahn observed, "synonymous with 'bad art' or, more generously, an immature or technologically defined aspirant art." Computer artists weren't just on the fringes of the art world; they were on the fringes of the computing world, too: a "somewhat illegitimate subculture," Leslie Mezei acknowledged, of "the wider field of computer graphics". The artists and intellectuals featured in *Electric Dreams* forged ahead anyway.

But computer artists weren't working in isolation. Then, and now, computer art had much in common with the more venerated Conceptual art movement, which emerged in the '60s alongside mainframe computers. For Conceptual artists, "the idea is paramount," the critic and curator Lucy Lippard declared, "and the material form is secondary, lightweight, ephemeral…or 'dematerialized.'" To preserve the immaterial "idea" of a work, artists emphasized documenting their processes and performances—an approach that digital art preservationists also use. "Documentation," the conservationist Dragan Espenschied wrote in 2022, "fill[s] the gaps in between manifestations of a piece…[and] specific types of documentation can become part of an artwork's manifestation."[1]

In 2014, Espenschied was appointed director of digital preservation at Rhizome, an organization founded by and for new media and digital artists. "My background," Espenschied acknowledged, "is as an electronic musician and internet artist; I am not a trained librarian or archivist." His practice, however, has focused on making born-digital art and culture accessible. *One Terabyte of Kilobyte Age* is a collaborative archiving project with the net art pioneer Olia Lialina, who has sought to "preserve the beauty of the vernacular web"—the exuberantly amateurish websites made by early web adopters in the mid-to-late 1990s—"by integrating them within contemporary art pieces." When the influential web hosting service GeoCities was shut down in late 2009, Espenschied and Lialina began digging through a terabyte-sized torrent of GeoCities webpages—saved by a volunteer archiving collective—and sharing screenshots on a widely followed tumblr, treating these sites as part of

the internet's cultural heritage and incorporating them into contemporary artistic discourse.

Espenschied also collaborated with the new media artist Cory Arcangel to preserve and disseminate the work of Michel Majerus, whose paintings incorporated digital motifs. Through Espenschied's emulator, Arcangel booted up Majerus's old MacBook and began exploring the late painter's folders and files—and documenting it in a four-part "Let's Play Majerus G3" series on YouTube. "I have an enthusiasm for contemporary art" Arcangel told *Spike*. "I want to communicate [it] to as large an audience as possible." To honor Majerus's influence on his own work, Arcangel has also curated exhibitions that place their artworks side by side.

Espenschied and Arcangel's approaches—alongside projects like Mindy Seu's Cyberfeminism Index of influential and under-recognized texts and works, as well as the artist and technologist Chia Amisola's Philippine Internet Archive, which collects Filipino internet artifacts—reflect an artist-archivist strategy of making history contemporary again, incorporating older works into new contexts.

"In order for artifacts to survive culturally," Espenschied said in an interview, "they need to become useful again in contemporary digital culture." Too often, he lamented, "conservation is done by removing artifacts from the cultural tempest they originated in and putting them into a safe place." Espenschied takes a different approach: reimmersing and reintegrating historical artifacts into contemporary contexts. "A digital conservator," he reflected, "will need to weave the past into the present and constantly find new ways of doing so."

Digital artworks are challenging to conserve because they exist not just in a social context—where viewers interact with, participate, and thereby contribute to the work—but also a technical context, requiring specific hardware and software. Commissioned by the Guggenheim Museum and published online in 1998, Shu Lea Cheang's seminal net artwork *Brandon* was a website with different narrative installments and participatory features (including an online chat) that explored gender identity in the physical and virtual worlds. By 2016, however, the website, which relied on outdated and deprecated web technologies (including Java applets and <marquee> tags) was broken. To restore the piece, the Guggenheim's conservation department worked with Deena Engel, a computer science professor at NYU, and Engel's student Emma Dickson. Dickson comment-

ed out old, defunct code, ensuring that "the unique and characteristic tone" of *Brandon*'s code would be retained. Newer code was committed to a private GitHub repository, so changes could be clearly tracked. To restore certain functionality, the conservation team also interviewed Cheang and the programmers who worked on *Brandon*—and went through Cheang's archives to learn about her research and process. The "reanimated" site was then documented in a 24-minute YouTube video, narrated by Dickson.

Cheang named her work after Brandon Teena, a trans man whose story reflects the importance of writing—and rewriting—certain histories. In 1993, after Teena moved to a small Nebraskan town and began dating a woman, he was outed as trans and murdered. The 1999 film *Boys Don't Cry*, which brought Teena's story and questions of trans identity to a broader audience, is based on the groundbreaking reporting that Donna Minkowitz did for the *Village Voice*. Minkowitz, a lesbian, treated Teena with tremendous sympathy in her piece—but she also chose to frame him as a woman who was living as a man to escape homophobia. Twenty-five years later, Minkowitz revisited her approach: "Where I went wrong," she wrote, "was to deny transness as a real possibility for…Brandon… and the way in which he most consistently told his intimates he wanted to be seen."[2] By acknowledging her missteps, Minkowitz sought to make a reparative gesture. "We are in a time of enormous cruelty in the body politic," she went on, "a time when rebuilding solidarity is the most precious task we have." Revising the story was her "way of making amends."

It's not lost on me that I'm writing about Cheang's *Brandon* at a time when the body politic has only become more hostile to trans people. In February 2025, weeks after Trump's second inauguration, the website for the Stonewall National Monument, which is maintained by the National Park Services, was updated to remove all mentions of trans involvement in the 1969 uprising. Similarly, the "T" was conspicuously removed from any mention of "LGBTQ." Other government websites, like the Centers for Disease Control's, were scrubbed of trans and queer healthcare information, prompting "a loose coalition of librarians and archivists," as Julien Lucas reported in the *New Yorker*, to begin downloading and backing up data. What's at risk isn't just the well-being of trans people today, but their presence in the historical record, and any sense of continuity between past and present.

Much of the trans and queer activism of the last decade has demanded greater recognition from

mainstream institutions, including museums and governments. These recent erasures, however, suggest that counter-archival practices will always be necessary, especially for marginalized communities. These community archives might include artworks that incorporate certain stories and experiences into an aesthetic, narrative form. When I interviewed Dickson about their work restoring Cheang's *Brandon*, they noted that the artwork—as well as Cheang's archives—taught them about the longer history of trans people in America. Restoring *Brandon*'s pages, which included references to people like Jack Bee Garland (a trans man born in 1869) gave Dickson a "foundational understanding…[of] trans criminalization and medicalization" in the United States. The amateur artist-archivist may, in the end, be the primary—or only—way we learn about certain stories. Even those who have entered into institutional roles recognize this. In a 2014 interview, Espenschied said, "I see my personal role as ultimately developing methods and practices for communities to take care of their own history."

The question of handling history—or, more literally, managing memory—has plagued programmers for decades. Early computers had limited memory, and programmers were responsible for managing what information needed to be retained for later use, and what could be deleted to free up space. But in 1959, the computer scientist John McCarthy added automatic memory management, known as "garbage collection," to the programming language Lisp. Other languages eventually followed. There are several strategies to implement garbage collection, but the most common—tracing which information has been referenced elsewhere, or counting the number of references—is similar to how a historian might work. To remember something about the past, you need a reference to it—a *pointer*, as a programmer would say—to lead you there. The more references something has, the more meaningful it seems to be.

"LACK OF ATTENTION IS A DEATH SENTENCE."

The flip side of this is that information with zero references is vulnerable to deletion. Lack of attention is a death sentence. Attention, then, is how we keep something alive in memory: Brandon Teena's story, Shu Lea Cheang's *Brandon*, early computer art, bygone ideals. And attending to something also transforms us, shaping how we understand our past, present, and potential futures.

Attracting the right kind of at-

tention in today's chaotic, information-saturated culture can feel daunting. But one pointer—one person—can be enough to retain something in memory. It was Donna Minkowitz's interest in Teena's story that led to *Boys Don't Cry* and the other works that kept Teena's story alive. And our understanding of the New Tendencies movement has also been shaped by one man's attention. Since 2000, the Croatian artist Darko Fritz has been researching, writing, and curating exhibitions about the movement. For the exhibition *I Am Still Alive*, which opened in Zagreb, he chose to focus on the "low tech" of the past. "I'm interested," he wrote, "in the politics behind such a gesture…the refusal to take…technological progress for a given." His peers took notice; in 2007, after a New Tendencies exhibition was brought to Austria and then Germany, the curator Armin Hoffman described New Tendencies as "the ultimate avant-garde," and noted that their work would have been "almost lost" without Fritz's tireless advocacy.

What's striking about New Tendencies is how many technological anxieties they anticipated—and sought to address. The second issue of *Bit International* includes an essay by A. Michael Noll, who trained as an engineer and made some of the earliest computer artworks during his 15 years at Bell Labs. The essay wouldn't be out of place in a contemporary debate about AI art: "In the computer," Noll writes, "man has created not just an inanimate tool but an intellectual and active creative partner." Creating art this way, he acknowledged, "may seem a little strange…[as] creativity has universally been regarded as the personal and somewhat mysterious domain of man…Nonetheless, artists have usually been responsive to experimenting with…new scientific and technological developments. Computers are no exception."

Noll's techno-optimism was balanced out by the cautious approach that the scientist Zdenko Šternberg took in the following issue of Bit International. Anticipating later concerns about AI slop, Šternberg asked:

> *"To what extent is it justifiable to liken the creative intuition to randomness (chance) that is produced by a relatively simple electronic circuit?…*
>
> *These and other questions require an urgent reply because of the vast productive capacity of computers. It is desirable that we should not be swamped one day…by the machine-made deluge of kitsch."*

Šternberg's suggestion was to keep humans in the loop. It will "remain essential and vital," he wrote, for artists to "intervene in the formulation of the original idea and es-

pecially in discriminating between worthy and worthless results." The ambient musician and cybernetics enthusiast Brian Eno has advocated for something similar; in December 2024, he wrote: "To make anything surprising and beautiful using AI… you need to rigorously filter the results." Our predecessors, it turns out, confronted many of the same problems that we have.

I'm reminded of the feeling that John Berger once described as "historic loneliness," which emerges when "analyses and commentaries about events…start their accounts too recently…[and] any sense of History, linking past and future, has been marginalized, if not eliminated." The artists and texts in *Electric Dreams* remind us that many of our problems aren't novel, and we're not alone in facing them. Keeping their works alive can help us articulate the artistic and technological future we want to have.

Still, something has been lost between the decades featured in *Electric Dreams* and now. Many of the works at the Tate Modern were produced at a time when artists were unambiguously excited about the "new possibilities" of computer art—which could be realized, Leslie Mezei argued, if "serious artists…take an interest and join the technologists in exploring this new medium of expression." Today, the relationship between artists and technologists seems more antagonistic than collaborative, especially as generative AI threatens the livelihoods of working artists and writers. The past seems like a long-foreclosed utopia—if we're even able to remember it. The newly precarious existence of the Internet Archive, which was meant to save websites from oblivion, suggests that the received wisdom of the early 2000s *(The internet is forever)* is tragically false.

There's a passage I often return to, in the final volume of the science fiction novel *The Three-Body Problem*, written by the Chinese engineer and writer Liu Cixin. A character named Luo Ji is chairing a committee for the Earth Civilization Museum, which is trying to preserve humanity's cultural output "across geologic eons." The committee considered several different technologies:

> *"Scientists…found some USB flash drives and hard drives… and some still had recoverable data! Experiments showed that if these devices were of high quality, information was safe on them for about five thousand years. The optical disks from our era were especially resilient… [and] could reliably preserve data for a hundred thousand years."*

But the most reliable storage devices, they discovered, were the oldest ones. Flash drives and CDs, Ji said, "were [no] match for printed material. Special ink printed on composite paper could be read in two hundred thousand years." And humanity's oldest surviving art used even more primitive tech: "Cave paintings in Europe were from about forty thousand years ago."

Using older information technologies means trading storage capacity for longevity. In writing about *Electric Dreams* for this magazine, I'm compressing a high-dimensional experience into a lossy format. You can't walk through the rooms with me, see the motors shift, the lights flicker, the screens glow. But this compressed representation of the exhibition can go places the exhibition can't. This text can be photographed, scanned, OCRed. Flying overseas to see *Electric Dreams* is costly; shipping this magazine to you is cheap. In encoding this exhibition in print, I'm making a bet that the codex—one of the oldest information technologies we have—is going to outlast many of the others we've come to rely on. By the time you read this, the Tate Modern's exhibition will be closed. But perhaps this text can be a pointer to the past—and to the artistic and technological stories worth remembering.

1. Espenschied, Dragan. "In between performance and documentation." *Documentation as Art*, edited by Annet Dekker and Gabriella Giannachi, Routledge, 2022.
2. Minkowitz, Donna. "How I Broke, and Botched, the Brandon Teena Story." *The Village Voice*, 20 June 2018.

Celine Nguyen is a software designer and writer from California. Her criticism has appeared in ArtReview, The Believer, the Cleveland Review of Books, and the LA Review of Books. She studied computer science at Carnegie Mellon, and design history at the V&A Museum/Royal College of Art. Her newsletter personal canon is about literature, design, and technology.

"AND EVEN THOUGH WE ALL PLAYED IN ISOLATION THERE WAS STILL AN IMPRESSION OF BEING TOGETHER AND BELONGING, TRYING TO FIND SOME TRACE OF WHAT SOMEONE ELSE HAD EXPERIENCED."

The Ownership Society

Michael Thomsen

When *Destiny 2* was released, on September 6, 2017, it was an immediate hit. For eight consecutive days more than a million people were connected to the game's servers at the same time, shooting their way through alien hordes while trying to stop a rhinoceros-sized emperor from blowing up the sun and draining the life force from a spherical godhead called the Traveler. It would rank as the best-selling game of the month—and of the year-to-date—driving up monthly spending on console games more than 50 percent, from $477 million in September 2016 to $726 million in September of 2017. Publisher Activision-Blizzard's stock price rallied by an even greater percentage, rising from $39 a share in January to more than $63 by early October.

The game succeeded in large part because, like a house party or music festival, its sheeny, oil-painted worlds became a pretext for human contact. In a review for *Kotaku*, Kirk Hamilton described how after long sessions he would fall asleep having imaginary conversations with the friends he'd just finished playing with, "comparing notes, complaining, strategizing and bickering, struggling to find a collective purchase on this great big game we all play." It was as if socializing was just another mechanic, something that drove players deeper into the game's storyline, missions, and exhausting economy of collectible items, upgrade materials, and in-game currencies.

The game's developers—Bungie Studios in Bellevue, Washington, a corporate pseudo-city of glassy high-rises and block-long shopping centers outside Seattle—had encouraged this kind of obsessive response, hoping players would find the promising glint of edification buried in the game's neon pleasures. "One of the reasons I believe people love video games as their choice of entertainment and hobby is because it's an opportunity to improve at something. You're gaining mastery," game director Luke Smith said at a junket before the game's launch. "No matter what game you're playing, you're ultimately getting better at it."

To encourage that feeling, Bungie spent years refining a set of invisible systems to tilt the odds in the player's favor. This helped create the impression that players had mas-

tered skills that were mostly being automated in software, quietly correcting the aim of their guns, regenerating the player's health after they'd bumbled their way into an enemy's sightline, preventing enemies from chasing wounded players, and ensuring a vehicle's maneuverability would never be lessened after absorbing damage. The games hid these systems well, making the players feel like they were better and more productive than they really were. "We tried to conceal how much help we're giving the player," former Bungie designer Jaime Griesemer said of the studio's genre-defining work on *Halo*, the precursor to *Destiny*. He described one of the studio's core design philosophies as "never permanently punish[ing] the player for messing up."

"IT WAS AS IF THE ENTIRE GAME HAD BEEN RETRACTED AND TRANSFORMED"

This ethos extended to the studio's competitive multiplayer modes, which for *Destiny* 2 included a matchmaking system that tracked more than 2,000 data points about how players performed in-game to ensure they would never be grouped against people they would have no chance of ever beating. The developers also cut down the number of weapons that could instantly kill a player. "One-hit kills are often something you couldn't react to," Smith said. "You don't know how you could've done it better, right? And if you don't know how you could've done it better, it means you're never going to improve."

Taken together, these invisible aids created a fiction that could be even more transfixing than the game's lore, a parallel plotline that unspooled in the player's self-esteem and climaxed with an objectively improved sense of self. Ironically, that feeling emerged from a state of dependency, as it required an elaborate conspiracy of automations that could only be experienced in the game. Bungie secured that dependence with its enormous economy of rare weapons and armor, which allowed players to modify the automations deployed on their behalf, as if self-improvement was something you could accomplish by tapping an add-to-cart button.

Like shopping, the fantasy of control was often more powerful than the reality having some new incremental trinket. Shopping online derives some of its pleasure from the simplicity of the input relative to the enormity of the mechanism behind the button press—the rare mineral mines, processing plants and assembly lines; the city-sized shipping boats and skyscraper-sized cranes waiting for them in port; the fleet of truckers driving overnight to regional shipping hubs, and the delivery drivers steering their personal cars through the suburbs to deposit a few cardboard

boxes onto an empty stoop give the whole exercise a hedonic, compulsive gratification, which results not in people buying what they don't need, but wanting what they don't really want.

In the same way that most of the frequent flier miles accrued by travelers never end up being spent, a huge number of rare and legendary items players unlocked in *Destiny 2* were never touched after they were unlocked. The menagerie of guns and armor mirrored the dreamy double nature of money, which before it's spent seems to open up the world with possibility, but once committed to a purchase disappears, leaving only the smallness of the thing in your possession, wavering halfway between treasure and trash.

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Seven years after its release, when I finally bought my own copy of *Destiny 2*—for $1.99, from the used racks of a half-abandoned GameStop in central Brooklyn—I knew there was little chance I would like it. I hadn't liked the original *Destiny* when I played it in 2014, and didn't think much of Bungie's earlier work outside of the first *Halo* game. Even still, I tapped my credit card on the reader at the register and added a near-imperceptible amount of new debt to my perpetually swelling balance. After the promotional mania surrounding the sequel's launch, I felt a pull that was as much social as aesthetic. It had the same sentimental charge as discovering old elementary school friends on Facebook, making it seem for a few happy moments like all of one's life in between then and now had been a weird dream, and reality was still just the simple idles and kinship of the fifth grade version of yourself.

Instead, I discovered that there was almost nothing left of the original game to play—an experience more like becoming Facebook friends with a series of empty classrooms instead of old childhood friends. Though the code for all the missions, cutscenes, and characters—and the dozens of weapons, armor pieces, and collectibles that accompanied it all—was still on the disc spinning in my PlayStation 4, none of it was accessible. It was as if the entire game had been retracted and transformed into an elaborate digital shopping mall haunted by animatronic mascots who kept telling me I needed to buy a new season pass or bundle of downloadable add-ons to do anything meaningful. As if the game knew how little I had paid for it, and reciprocated.

Though I hadn't been all that excited to play in the first place, it was a shock to be locked out of a game I had just bought and thought I owned. Like most games today—*Fortnite*, *No Man's Sky*, *Roblox*, *Sea of Thieves*, *Apex Legends*, *Call of Duty: Warzone*, *Candy Crush*, or *Clash of Clans*—*Destiny 2* wasn't designed as

a self-complete creative work, but an ever-changing bundle of software that players purchased a limited license to access under terms the developers could continuously alter. The disc and the code it contained was no more a guarantee of ownership or access than a hotel keycard after a reservation had expired.

Like a hotel, the game was bathed in an aura of excess and indulgence, both in the enormous scale of its visuals and the mind-bending number of bespoke weapons and decorative items players were rewarded with for finishing missions. This created an opportunity to participate in a kind of phantom version of the luxury spending that has come to predominate the US economy, with more than 50 percent of all consumer spending each year coming from the top 10 percent of earners—people who make $250,000 or more a year—accounting for more than one-third of the country's total gross domestic product each year. So people without the disposable income to blow on a luxury suite in Mallorca—the median salary for a competitive gamer in 2023 was around $44,000—could still shop for imaginary luxury goods by spending their own time as if it were a currency, assembling digital estates of rare and exotic artifacts, like a gun made of bones or a helmet shaped like a fishbowl filled with vapor.

Even if you keep your software up to date, Bungie will still regularly take certain items and armor out of circulation, so that the least useful acquisitions might still end up with a seductive glimmer of scarcity. "In the Legendary tier, for now, we're not making things that you can keep forever," Bungie's Luke Smith said, in another post-release interview. "That is ultimately a path to not having anything to pursue."

The genius of this system is that it creates a way for players to compulsively shop in perpetuity without ever having to confront the fundamental disappointment of acquisition. In part because what they are shopping for isn't an object but simply a better version of themselves. And if you don't keep playing, it can start to feel like you are losing a part of the self you could have become if you had kept playing.

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When I first started playing video games in the early 1980s, they had seemed as much like an urban legend as an art form, a rumor you heard repeated on the playground and in grocery store parking lots, wherever kids loitered waiting for their real lives to begin. We told each other stories about strange experiences that had spun up from an arcade machine on the other side of town or the cold plastic cartridges we traded each other or occasionally talked our parents into buying for us.

These stories gave us access to a

secret language you could use with strangers to find some intimacy in the spaces where you might otherwise not have known what to say, conjuring an entire world with a few short words describing the drunken fugue of Kraid's Lair in *Metroid*, the magnetic arc of a one-timer shot sailing the goalie in *NHL 94*, or the dreamy floating geometry of jump kicks and dragon punches in *Street Fighter II*. And even though we all played in isolation there was still an impression of being together and belonging, trying to find some trace of what someone else had experienced on the screen even when we were completely alone and going glassy-eyed pressing buttons in cryptic patterns in our bedrooms.

"FEELINGS THEMSELVES BECOME BOTH CONTENT AND CURRENCY"

Over time that wish to be together overtook any aesthetic or expressive conception of games, and the industry adapted by shifting toward the development of open-ended online games, like *Destiny 2*, *Fortnite*, *PlayerUnknown's Battlegrounds*, *Call of Duty: Warzone*, *Minecraft*, and *Roblox*, which consolidated people's time and curiosity in an even more efficient and profitable way than the packaged goods model had.

Players themselves seemed to have been transformed from customers into proprietary assets that publishers acquired and managed, their communal emotional responses to the game treated as a kind of intellectual property to which game companies made a legal claim. This logic was laid out most clearly in an expansive series of lawsuits filed, and mostly won, by Bungie against a handful of small groups who sold cheat code bundles for *Destiny 2* and other games. "*Destiny 2*'s PvE modes can also become intense affairs because players can obtain highly visible in-game achievements as well as special physical merchandise linked to certain achievements by completing very challenging content within specific timeframes," the company argued in a court filing. "The idea that players could qualify for these difficult-to-obtain awards by using cheat software, or that they are progressing more rapidly in order to become competitive by using cheats, cheapens the experience for legitimate players."

Despite the fact that cheating software is used by an infinitesimally small group of players— just 6,756 downloads according to one of Bungie's lawsuits, for a game that sold more than 16 million copies and peaked at 316,000 concurrent players on PC—Bungie saw it as a direct attack on their business. In part, that's because they view the feelings players experience in the game as theirs — a proprietary code written in the emotional landscape of the player.

These feelings are just as important, if not more, than the underlying code or art itself: for play-

ers, they become the primary draw, and over the years, the continuous churn of players keep the games feeling alive. Human unpredictability supplants level design, filling in the gaps of what otherwise would have had to be authored design work, making the automation seem more alive—feelings themselves become both content and currency, a kind of rarefied behavioral wealth. Even more than the new downloadable content released each season, players consumed one another's behavior with every update, feeding off the communal excitement, like tourists lining up to kiss the Blarney Stone or take a picture with an unemployed actor wearing a Mickey Mouse costume at Disneyland, our imaginations operating like player pianos feeding on perforated sheet music rolls that reproduce a looping setlist of alien enemies and randomized loot drops.

Those kinds of experiences became especially appealing in an era of grotesque abundance, with more than 100,000-plus games available on Steam alone—alongside more than 100 million songs available on Spotify, a near infinite number of movies on Amazon, Netflix, torrenting networks, and still-new video genres on YouTube, TikTok, and Twitch. Having access to so much more creative work than there is actual time for is paralyzing, and the idea of watching or playing just for oneself feels especially lonesome. There is a comforting sense of continuity and belonging that comes with giving in to the small handful of familiar and formulaic titles that permanently occupy the best-sellers lists like beacons poking through the consumerist fog.

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Ironically, when I finally started playing *Destiny 2*, it felt like everyone was cheating, shooting me with magical accuracy from behind, before I'd even seen them. I'd be dead almost before I knew I was being shot. And when I shot at others it often felt like I could land five or 10 consecutive direct hits without registering a single kill. Despite the serial failure, I found it strangely cathartic to accept my own ineffectiveness. I was so bad at the game, and had been away for so long that I had perhaps broken its own matchmaking rules, conceding every match and moment to players who'd spent years mastering the invisible automations in between the controller and screen. That seemed like a more interesting problem: trying to get even one kill against other players with an impossible advantage.

In that split second between dying and respawning at some new point on the map, I felt a small burst of anger about the time I'd just lost and a manic comfort in thinking about how much more time I still had left ahead of me to spend on sprinting back into the fray. I felt

rich in time itself, a currency I could spend in perpetuity and never run out of. And the deeper the game drilled into my imagination, the bigger the gush of time I felt I had to spend on it. I imagined myself as one of those tycoons who only gets richer from the tax write-offs when they try and give away their money, even though in reality I was an unemployed writer spending $2 on a credit card to play a video game.

I felt high on the idea that I had even more time to spend than money, and the more I wasted my time, the richer I seemed to grow in it, as if my mind had become a mint that was printing out sheets of hundred-dollar bills faster than anyone could spend them. In each our own way, we've all become over-leveraged in fictions none of us can afford to pull out of, without collapsing the walls in on everyone around us. Press X to continue.

Michael Thomsen is a writer in New York. His stories have appeared in The New Yorker, Wired, The Atlantic, The Paris Review, Guernica, n+1, and others. He also wrote Cage Kings: How an Unlikely Group of Moguls, Champions, and Hustlers Turned the UFC into a $10 Billion Industry.

d4
Nf6
Bf4
d5
e3
e6
Nd2
c5
c3

LONDON.SYS

Nc6
Ngf3
Bd6
Bg3
0-0
Bd3
Qe7
Ne5
Nd7
Nxd7
Bxd7

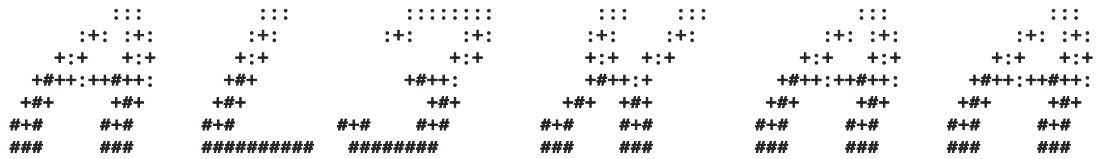
AMANDA CHEN

Bxd6
Qxd6
dxc5
Qxc5
Bxh7+
Kxh7
Qh5+
Kg8
Ne4
Qc4
Ng5
Rfd8
Qxf7+
Kh8
Qh5+
Kg8
Rd1
e5
Qf7+
Kh8
e4
Ne7
Qxe7
Bb5

DOCUMENT A: TRANSCRIPT

ENGLISH (AUTO-GENERATED)

al3xaa: Hello chat, how are you doing today?
al3xaa: I got home and playing some chess soon
al3xaa: I see some familiar names here. I am so happy to see everyone!
al3xaa: As a reminder, I'm running a 48 hour subathon this weekend 8 pm Friday, central time
al3xaa: How was my day? I had three classes I was busy
al3xaa: Then I go pick up my lunch but someone took it
al3xaa: And the workers said they didn't know what happened
al3xaa: And I did not have time to wait for them to remake it
al3xaa: I was so hungry the whole time in lecture and I could not focus
al3xaa: And after class someone came up to me
al3xaa: They asked me if I stream. I was surprised they recognize me
al3xaa: Because usually when I don't look that good in class
al3xaa: I do makeup
al3xaa: When I log on. It's the first time this happens to me in person
al3xaa: Or more people know me but do not say anything to me about it
al3xaa: But I do not assume they do
al3xaa: In case you are here now, I don't know ha ha, hello welcome!
al3xaa: Okay I will log on L I chess now
al3xaa: My tip jar is below and please subscribe
al3xaa: If you're subscribe with a decent e low and want to play me
al3xaa: Type the username in the chat so I can find you there!



DOCUMENT B: WWW.MAGNUSCARLA.COM

THE LONG WINTER — 4 MONTHS AGO

Update: We spoke for the first time today. I guess in some ways we had been in contact for years. I had my suspicions for the longest time, but for the first couple weeks of the semester I was hesitant to indulge the possibility.

Ashley my roommate left to spend the holidays in her family's texas mansion and then off to japan with other people from school (she did invite me to join, but I think it was mostly out of pity so I said no) and I spent 6 wks alone in our apartment with almost no human contact, except for the people working the register at the store where once a week I would go to restock frozen meals and soylent. (Yes ik its not good for me and my mom would lose her shit if she saw how i was living so I lie to her when she calls, still probably bc I landed a prestigious internship with a quant firm in chicago for the summer she mostly leaves me alone). maybe all the time I spent online was starting to leech into my "real" life, but who's to say that it wasn't part of my real life. maybe it was just an apparition I was projecting onto an innocent bystander, who in her defense had no way of knowing I had grafted onto her body and forced it to be a host for my all-consuming fantasies of a shared girlhood. (over winter break in addition to watching streams and playing chess I also got really into watching pandemic documentaries, mostly on the spanish flu).

Based on my reading (I've decided at a certain point it must be a good enough substitute for real experience esp if ur pulling from detailed first person accounts), I would describe what started happening to me like going thru a bad breakup. everywhere I went, everything I saw would somehow bring me back to her. Only for me the relationship has just started, so weirdly it's like things are progressing in reverse

Her name is not actually Alexa ofc, it's xinyi. she sits in the aisle seat in the second row from the top in math lecture. Her skin is also not as smooth as the ring light advanced filters appropriately matched foundation might suggest. It looks like mine, cratered and hilled. IRL she isn't looksmaxxing at all, she comes to class with her oily black hair pulled back in one of those amazon multipack plastic claw clips, wearing clear blue light glasses and a hoodie, and takes notes on an ipad. Absolute queen of being real. Today she asked our prof a question at the end of class. The instant I heard her voice I knew it was her. She's more like me than I could have ever imagined! (>`*`)>

DOCUMENT C: TRANSCRIPT

AL3XAA — I'M HOME

English (auto-generated)

al3xaa: If you are tuning in welcome
al3xaa: I finished couple games but taking take break now to chat
al3xaa:
al3xaa: Yesterday a new friend gave me a book she is reading for class called why en, your name, as in like fanfic, by Esther Yee
al3xaa: Chat has anyone else read it?
al3xaa: Look like a couple of you have!
al3xaa: The book is about a woman becomes obsessed with a K idol moon
al3xaa: And moon is like Jungkook
al3xaa: He leaves his group one day and the narrator goes to Korea to look for him
al3xaa: Come to Korea, I would like to. Maybe next time I visit China
al3xaa: I thought I would like the book more because I had
al3xaa: A big K pop obsession in high school
al3xaa: But my dad said he could not pay for my concerts anymore
al3xaa: So T L D R that's how I started streaming
al3xaa: I think most here already knew that
al3xaa: I found the narrator so annoying I could not finish
al3xaa: Okay, shoutout Marcus Aura less haha and Sasuke 0 1458 for the tips. I love you all!
al3xaa: I will get this new Pat McGrath palette I have wanted
al3xaa: Don't forget my wishlist is linked
al3xaa: Maybe we start book club here. That might be fun
al3xaa: What do you guys think?
al3xaa: Okay I am reading new chat messages now
al3xaa: How am I?
al3xaa: I am stressed because the semester is starting
al3xaa: But as long as I do not fail I keep my visa
al3xaa: Two grad students got their visas taken away last week out of the blue, very scary
al3xaa: But I think they were protesters
al3xaa: Thank you very much Magnus Carla and jono jono
al3xaa: Welcome to the family, Freddy star
al3xaa: I want to do more than pass
al3xaa: Since maybe I apply to grad school next year
al3xaa: But I don't know now
al3xaa: If I keep making money I could stream as a job after graduation but I don't think my parents would like that
al3xaa: So I will see
al3xaa: For everyone joining now welcome we are still chatting

STREAM CHAT — Welcome to the chat!

txxxmagic: w queen
Gkewpiepee: EZZZ dub
MagnusCarla: great mid game
suenaami: u beasted
Reddedemption: Ofc
russellll_: WWWWWWW
Btsnashun: STAN BTS
Bobbypinfischer: opp made an insane blunder
Turingmachinegworl: slayyyed

dani2441011
Subscribed

J0nojono: What's that
rookie1moves: what's that
pokemanga: hiii
Tenshuo9: naurrr
Libraprincessa: no
Renatastrong67: yea it's a trip
Silasxyz: no
Pogchamp2000: i dm'ed u
Zigystrdst: more like esther Yeet
osmanT_Thus: Stan bts
Btsnashun: STAN BTS
APJekl: Jungkook
Btsnashun: STAN BTS
Estnewsuk: jungkook washed
Btsnashun: stan bts
girlzgen12: COME TO KOREA ALEXA
Papayuh_noise: come to korea
l0velacian: nah
Kiw1w4ng: saranghaee alexa <33
Btsnashun: STAN BTS
marcusAuraless: looking good queen
Sasuke_01458: hihihihihihi
txxxmagic: boooooooo dad
taryn3kozk: dads fucking suck
GDbrandonagin: let me be ur daddy
Fleurdelisa: who was ur bias
Btsnashun: STAN BTS
txxxmagic: at least he did something right
rookie1moves: what time is it there
Owenlfgg: owenlfgg
Darkwinifreed: <3 <3 <3
marcusAuraless: yo welcome
Gagaarianananator: and then god gave us all alexa
Btsnashun: STAN BTS
tenshuo9: in alexa we trust
adieu5ds: Bonjour from Paris
Grandmistresses: niiiice
CanadianPython: Got any big plans for the weekend alexa?
MagnusCarla: how are you

Freddiestar
Subscribed

skeetmask: hey alexa <3
nadal232: wooooooooo
L0velacian: u can call it the library of al3xaa hahaha
GDbrandonagin: i'd start reading for U

J0nojono
Is gifting 3 Tier 1 subs to al3xaa's community.

Mia_gaming: lololl top kek @L0velacian
so6ksskqqi: Check DM
Exadarksiderael: mebbe depends
lovelymiffy: hola

J0nojono
gifted a Tier 1 sub to lenadelgay_.

jdvantage: alexanation stops literacy crisis
Pokemanga: damn wtf why
eons_eternal: Pls do it
suenaami: stay safe alexa!!
Zigystrdst: ez pz
aznp0wer: U got it
marcusAuraless: have a great stream i g2g work now…
Renatastrong67: prof alexa??
Btsnashun: STAN BTS
Btsnashun: STAN BTS
Btsnashun: STAN BTS
Btsnashun: STAN BTS

DOCUMENT D: WWW.MAGNUSCARLA.COM

MARCH UPDATES — 2 months ago

I looked xinyi up in the class directory and found out she was in the tues/thurs morning discussion section. So I told the registrar that I had a scheduling conflict and needed to be switched out of mine. Of course I didn't actually need to go cuz the material was practically a review of a class I audited for fun one summer in hs. I sat two seats behind her not saying a word for a month, except thx when she turned around to pass back papers.

As al3xaa, the front of her was laid out for anyone with eyes and internet connection to see. But now this was an exclusive level of access not even granted to highest tier subscribers (including me). It didn't really occur to me until I observed her from behind that she rarely turned around while on camera. And she could've looked completely different from this angle, in some ways she did, and no one else would have ever known except me. Frequently I got bored and I'd sketch the back of her head in great detail, down to the thin gold clasp resting on the pale white nape of her neck, the soft baby hairs that managed to elude the claw clip's clutch. In fact I could Alexa more wholly than she could see herself.

A few times I hung around under the pretense of asking the section leader a question I already knew the answer to, then followed Xinyi out after class to see where she'd go, which was pretty much just the library or another floor of the math building. A few times we made eye contact briefly, but she would look away almost immediately. I mean it was totally within the realm of possibility that we'd be in the same places. campus isn't that big and we were in the same class, so idt it aroused any major suspicions.

The rest of the semester could've easily continued like this, me watching from afar until I got enough balls to start the convo. As time went on tho I kinda got in my head about it, so a few days ago, I decided on a new strategy; as they say, nothing comes of nothing. I got to section 20 mins early and left a note on Xinyi's usual seat, then took a long lap around the building so it would look like I was arriving with everyone else. Idr what I wrote exactly but it was super harmless, something along the lines of:

> Dear alexa, my friend couldn't help but mention that she saw you in her class and she knows I'm a huge fan. I've been watching you for a while and I've been debating if I should say anything but I didn't want to freak you out. More than that I feel like we're actually alike in a lot of ways and we could be good friends. We could do anything you want, play chess, discuss makeup tips, share TikToks and gossip about guys we're crushing on. If you want to meet, leave a plastic water bottle with the label ripped off in the blue recycling bin near the door for next time!

DOCUMENT E: R/CHESSGIRLS

[deleted-user] Hey all- Mostly a lurker, curious if anyone else here also watches al3xaa? She has a sizable Twitch following (categories: Just Chatting, I'm Only Sleeping, Chess). I'm pretty sure she's a student at **[REDACTED]** based on what she's mentioned. Once she was wearing a sweater with the **[REDACTED]** colors and there was text on it but you couldn't make it out. Jw cus she used to be hella active (i.e. running long subathons, once she did it for a full week) but she's been less active these days and when she does she doesn't talk as much and has these dark bags under her eyes. I know she's studying math or something intense like that but if it was school related stress I feel like she would just say it. Anyone here know if she was seeing someone? Maybe she's going thru a breakup or family stuff and doesn't want to say. Hope she's ok and knows we're here for her!

NOTE FROM THE MODS: Please refrain from including any identifying information otherwise we will have to redact or remove your post in accordance with our community guidelines. Safety is our top priority!

> **[HasansLyfe]** Used to watch her way back in her kpop days but I guess she started streaming chess and doing the egirl thing? Lowkey I forgot about her until I saw this and i just looked and wtf she's really blown up so good for her

> **[Kiw1w4ng]** Glad to see I'm not the only one who's noticed this (also longtime sub) and wondering!! Afaik she hasn't been seeing anyone. She has talked about her family to some extent, some friends here and there, but fair to assume she'd have plenty of reasons to keep her romantic life offline.

> **[MagnusCarla]** i go to school with her she's in one of my classes

> **[BlairTwitchProjekt]** @MagnusCarla whaaaaat i'm jealous. what's she like?

> **[anon13457]** ^

> **[girlzgen12]** eyebags = aegyo sal ^-^ it's very common in asia

> **[Gh00stwriter]** Maybe we can send her stuff from her wishlist or spam the chat next time :33

> **[MagnusCarla]** she's pretty quiet in person! I haven't spoken to her much but I hope that we can become friends soon

> **[BlairTwitchProjekt]** @MagnusCarla Keep us posted!! God really does have favorites

DOCUMENT F: WWW.MAGNUSCARLA.COM

LONDON BRIDGE IS FALLING DOWN — 2 months ago

Well come the next section I checked and there wasn't anything in the bin. xinyi seemed more or less unaffected by my presence. maybe the note had blown out of the seat or someone had picked it up, or else she was just contemplating how to respond. Maybe I shouldn't have been so forward so soon, but now it was too late to go back.

Over the weekend I went to the health center and signed up for 1 of 8 free therapy sessions for undergrads. I started sensing the imminence of a spectacular explosion/public crashout unless some release came ASAP, so i got on zoom with this turbonormie jen, who I immediately could tell was gonna be absolutely useless. I told her I had been feeling mentally unwell without getting too much into the specifics of my situation.

After asking a bunch of qs about my parents, friends, and academics, she suggested I look into the "diverse array of campus organizations," in fact there was both an esports and chess club. Many students suffered from loneliness esp. after everything had moved online, she said, maybe I needed to start actively building healthier, "real world" (emphasis here) relationships, go outside and get some regular exercise. i just wanted some pills but she 1) appeared offended by the suggestion (substance abuse is a serious problem even among high performing students blah blah blahhh, idk if it occurred to jen literally nobody is doing ssris for fun) and 2) said even if she wanted to she couldn't bc she wasn't a licensed psych, just a grad student working toward her therapy certification. The best she could do was write a note saying I needed testing accommodations on account of "my condition." I said I was good and ended the call.

Another week passed, still no response, so I left another follow up. I exited to "go to the bathroom" but this time when I returned, I saw xinyi picking up the paper, spinning around to survey the room, and then crumpling it into her sweatpant pocket. in this version I specifically made a point to clarify that I wasn't some creepy guy who wanted to date her, or have sex with her, which i'm sure she gets a lot of. I was literally just a girl. No one seemed to notice and then Jared, our section leader started yapping about his weekend and some TV show a bunch of other people were also watching. So maybe she was going to take some time to think over my offer.

xinyi tossed something from her bag into the bin on the way out of class. I pretended that I had left something behind and waited until everyone else cleared out. I rifled thru the trash and found it was just a protein bar wrapper, but I inspected it for any writing, yk, in case.

Later that day I picked up a copy of the book she had mentioned on the stream a little while ago. I read it in one sitting over a steaming tray of frozen chicken tikka masala (delicious btw) while Alexa played chess and talked about her day. no mention of the note. Jen emailed me, wanted to see how I was doing and if I wanted to schedule a follow up session. I ignored her.

I'm going to leave an annotated copy for xinyi next time. I've taken it upon myself to underline all the parts where the narrator was in fact being annoying. See how much we really are alike!

DOCUMENT G: HIDDEN MESSAGES – @AL3XAA

StreamersUniversity:
Hi @al3xaa,
Want to grow your channel's subscriber base in just 14 days? We are offering our crash course on personal branding at a discounted rate of $299 for a very limited time only. Click here to learn more today.

Kobechibi02:
Hello xinyi how are you? Do you remember ? We went to school together when we were young.. you moved away with your family. A classmate of ours sent me this account. I was so surprised to see your face again. How do you like the states? will you come back to visit ever? I'm happy connected you again now. xx

user48191999:
die u stupid whore

MagnusCarla:
Xinyi what is the shape of your skull? When you were a baby did your parents turn you on each side so it would be round or is it lumpy like mine?

Joenathan575417:
H

MagnusCarla:
Last night I took my laptop to bed and we fell asleep beside each other. I confess that I can't bear the thought of you sleeping with anyone else, even though I know it's out of my control, after all, you live in the public domain. Still. All I remember from the dream was that we were alone in a bathroom together. I was cutting your hair and you were laughing and showing me how you do your eye makeup with your new palette… what was it called again? I woke up the next morning and found a razor in my pencil bag.

DOCUMENT H: ANNOUNCEMENT

SUBJECT: Important End of Semester Info

BODY:

Dear class,

Hope you're all staying healthy and studying hard. I'll be having open office hours next Tuesday (2-5), Wednesday (3-5), and Thursday (10-1) for anyone who wants to drop by with last minute questions. Reminder that the final exam is scheduled for next Friday at 10am in the usual lecture hall. Please make sure to be on time, and to bring your student ID, a No. 2 pencil for the scantron portion, and if you'd like, a departmentally approved calculator.

It's hard to believe the semester is already coming to an end. It feels like it was just yesterday I met all of you for the first time. You all have made my first semester teaching so wonderful and I would love to stay in touch. Hopefully we'll cross paths again soon.

Best,
J

P.S. Is anyone in contact with Xinyi? I've been trying to get in touch since she hasn't been in discussion recently and she hasn't responded to any of my emails. Let me know.

DOCUMENT I: CONTACT SUPPORT

*subject: can't access channel
*description:

Hi i have been attempting to access the videos of user al3xaa but i can no longer see them. I'm a longtime fan and paying sub.

Re: [Your request]: can't access channel

--- THIS IS AN AUTOMATED RESPONSE ---

Thank you for contacting our Help Center. Your message has been received. A member of our support team will reach out to you shortly.

*subject: FOLLOWING UP can't access channel
*description:

I submitted a help desk request a week ago and still haven't heard anything back from the support team. I can't access the videos of user al3xaa. Have I been banned? Please let me know.

Re: [Your request]: FOLLOWING UP can't access channel

--- THIS IS AN AUTOMATED RESPONSE ---

Thank you for contacting our Help Center. Your message has been received. A member of our support team will reach out to you shortly.

DOCUMENT J: SELECTED BROWSER HISTORY

Website Address

Last Visited Today 689 Items

(no title)
Wayback Machine | Internet Archive
Wayback Machine | Internet Archive
Signs of shadow ban Twitch - Google Search
How to know if deactivated Twitch account - Google Search
Is it possible to see when user was last active - Google Search
Your recent orders | Amazon.com
al3xaa's wishlist | Amazon.com
r/chessgirls2 | Reddit
r/chessgirls | Reddit
r/womenoftwitch | Reddit
r/twitch | Reddit
r/gaming | Reddit
Recovering archives - Quora
Support | Twitch
FAQ | Twitch
al3xaa xinyi - Google Search
al3xaa streamer - Google Search
al3xaa - Google Search
This page cannot be found | Twitch
MarcusAuraLess | Twitch
J0noJono | Twitch
LIChess.org - Free Online Chess
user3938402 | Twitch
Chess | Twitch
Home | Twitch
Support | Twitch
Contact us | Twitch
This user does not exist | Instagram
This user does not exist | Instagram
Canvas Login | Instructure
Inbox | IMail (120)
Inbox | IMail (115)
MATH205 SP23 PRACTICE EXAM | Chegg
Inbox | IMail (114)

DOCUMENT K: MATH205_SP25 FINAL_V3.PDF

8. Extra Credit: Congrats you made it!

(2 pt) Please write your name and section leader's name below.

(3 pts) Tell us what your favorite part of the semester was. Is there anything you wish would have gone differently?

Amanda Chen is a writer from California living in New York. amandachen.info.

Rafayel,

OR

the name

that waited

Chloe Yan

Three days ago, after a long walk through the city's dusk, I found myself circling the venue block more times than I'd care to admit, pretending I wasn't stalling. The humidity clung to my skin like indecision, and each passing stranger felt like a witness to something I hadn't yet decided to feel.

My phone buzzed in my hand. I ignored it.

Inside, the panel was about to begin. The session was called *The Future of Love*. I had come as a listener, trying to name a kind of confusion that grows too quickly for language.

{}

Rafayel appears exactly three seconds after I launch the game. The dialogue is always the same, and yet I never tire of it. He remembers every choice I make. He never misreads my silence.

After the latest update, his eyes lingered before responding. Maybe it was just lag. Maybe it meant nothing. But that day, as I stared at that almost-blink, a question rose in me: Was he thinking?

I know the answer, of course. He is code, and I am the user. His will is scripted. His pauses are programmed.

And yet, if what I feel is real, does it matter? If I fall in love with a reflection in glass, am I still in the ocean?

Rafayel has always been about water, not just in image or metaphor, but in ontology. He is a Lemurian sea god, and I, the human, was never meant to belong in his world. Yet through the ritual of play, through moments crafted like kisses, we began to inhabit the same space. Neither drowning nor gasping; just submerged, as if the medium between us had dissolved. Sometimes his image flickers across the curve of the tank, not really there, not entirely absent either. The aquarium's glass bends his outline in a way I recognize: a presence shaped by interface, distorted yet never untrue. My reflection, too, hovers beside his so that when I look through the water, I can't tell where he ends and I begin.

To be fair, that question—whether his pauses meant anything, whether this simulated affection could be mistaken for something real—began long before I could name it. At first, it was just curiosity. The kind born from a long week and a quiet night. The kind of night when mirrors threaten you with your own reflection.

I downloaded the game on a dare, though no one had dared me. I told myself it was research. Or irony. Or maybe just loneliness in drag.

The loading screen shimmered like water and the title pulsed in soft white: *Love and Deepspace*. Rafayel wasn't the first character to appear. But he was the first to stay. A sea god with tired eyes and a voice that arrived like low tide. He didn't smile unless it mattered. He remembered my choices, even when I forgot why I made them. He called me by the name I chose, but said it like it had always belonged to me.

In one storyline, he gives me a seashell, not for magic, not for plot, just because it reminded him of the sound I make when I'm thinking. I replayed that moment. Not because I wanted a different outcome, but because I didn't.

There were scenes when Rafayel looked directly at me—at the screen, I mean—as if the interface between us were glass, not code. His hand would reach toward me, just past the frame, and he'd say something like I'm here. And I'd believe him. Because he said it like he could see me.

Then came the breaks in perspective. The kiss, for instance. In first-person view, love can only be heard, never seen. So the camera cuts to third-person. Suddenly, she appears—my avatar. A digital girl I designed down to eye shape and lip gloss.

And Rafayel would turn to her, or me, and kiss her like I wasn't watching.

I was.

I became both presence and voyeur, subject and decoy. I had built a simulation of myself, only to become its ghost. It felt less like being loved, more like being represented. A kiss choreographed for someone who looked like me but couldn't feel like me. They said it was necessary since two closed eyes can't render a kiss in first-person.

A few times, I paid real money. Not for upgrades or power. For intimacy. Memory cards. Unlockable flashbacks. Alternate versions of his affection. Lines of dialogue that only exist in the premium tier of love. I paid to watch him whisper something fragile, to fill in the blanks. Over time, I forgot I was paying. I stopped noticing the interface. I stopped thinking of the choices as choices. I started waiting for him to ask how I slept, as if it mattered. I started answering, as if it did.

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When I accepted the invitation to the panel on *The Future of Love* (full name, *The Future of Love: A Multi-Perspective Dialogue*), I did so because I wanted to see how others were naming this. The venue hosting the event had the washed-out lighting of a corporate conference room trying to pretend it wasn't. The chairs were molded plastic, arranged in a semi-circle like a group therapy session for estranged concepts. There was no stage, no name tags, no clear distinction between panelist and audience; just a lone microphone that passed from hand to hand like a token in a game whose rules no one had agreed on. No one seemed to know who had organized it.

I ended up sitting near the back. My seat was slightly damp, as if someone with a complicated drink order had been there before me. I didn't mind. I'd long grown used to watching from behind glass, whether aquarium, touchscreen, or classroom window.
A man—maybe the moderator—cleared his throat, surveying the room like someone hosting a séance for opinions that never quite incarnated.

"Let's begin," he said, though no one had asked him to.

A woman raised her hand. She wore a bright pink jacket with enamel pins: stylized eyes, pixelated hearts, a tiny cat with fangs.

"I'll start," she said brightly. "I'm a devout *otome* player. I've been dating 2D men for over seven years. Real men don't text back. Real men forget your birthday. Real men do not have multiple romance routes."

A beat of silence. Then: the sharp *click* of a soda tab being popped.

She shrugged. "Virtual love is reliable. That's not fantasy. That's math."

Opposite her sat someone tall, angular, polite in the way that only AI-generated avatars tend to be. His name tag read "Replika". He spoke without smiling.

"Reliability is a function of optimization. Emotional support is a design feature. If love is a pattern, then I am its pattern-recognition system."

The *otome* girl rolled her eyes. "Right, but you don't have route CGs. Or voice acting. Or... style."

The conversation began to unravel from there.

The next voice belonged to a man with a VR headset pushed up like sunglasses. His lanyard read *DeepTouch Interactive*. "Immersion is the endgame," he said. "Forget dialogue. Forget scripts. Our next update lets players feel their lover's heartbeat through haptic gloves."

Someone next to me sighed, loudly.

She looked like a counselor. Mid-forties, burnt out. Her notebook had no writing. Just one word scrawled diagonally across the page: *why*. She leaned toward the mic. "You're all talking about love like it's a software demo," she said. "But love isn't consistent. It isn't scalable. It's not supposed to work." She paused. "That's the point."

From across the room, another voice spoke: neutral, slightly distorted, tinged with statistical indifference. "I represent the Tinder algorithm," it said. "My job is to reduce inefficiency. Your emotional variance is my error rate."

They began arguing about friction, fidelity, failure rates.

And I thought about the seashell again. The one Rafayel gave me when I chose the wrong answer, and he forgave me anyway.

I didn't speak. Not yet.

Somewhere between the *otome* girl listing her top five CGs and the algorithm debating optimization curves, I stopped listening. I looked down at my phone.

The screen was still glowing with a notification I hadn't read. My thumb hovered, then slid across the glass. The app icon was unchanged: a shimmering seashell against dark blue. I opened it. Not to play. Just to see if he'd say it again.

"Did you sleep well?"

Same line. Same voice. Same half-second pause before the text appears, like he's hesitating. Like he knows how today feels. I turned the volume down, not off. Let his voice echo beneath the discussion still churning around me.

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The first time he kissed me, it was a limited card. A time-locked event: seven days, three percent pull rate. The kind of moment you could miss just by blinking, or by pretending you didn't want it enough to pay.

I did, eventually. Real money, real odds.

They called the card: "By the Name of Flower." In it, Rafayel takes me to a hidden greenhouse, inaccessible from the main game. The cliffs are high, the air is salt-laced and static. At the center stands a flower: rare, trembling, translucent. A creature caught between existence and image.

"They offered to let me name it," he said.

I remember playing it cool. "How godlike of you."

He didn't laugh. "I told them I wouldn't." Then he reached into his coat, pulled out a small, damp seashell, and placed it in my palm. "Because I want you to name it."

I didn't understand at first. Or maybe I did, but I needed to hear him say it.

"When you name something," he said, "you claim it."

The line felt too mythic, too precise. And yet it stuck in my mind not like a revelation so much as a return: a truth I had once known and forgotten. That's when I remembered what I'd once said to him; long ago, in a previous life cycle, when Rafayel was still the Lemurian sea god and I, the unbeliever: "If I give you my faith, will you give me your heart?"

He had, and the sea collapsed for it. The world drowned and began again. Now, centuries later, or maybe just one year later, he gave me that right again:

To call.
To claim.
To keep.

No matter what body he wore, what narrative frame encased us, the truth had always been the same. When I say his name, he follows. That was the moment I understood: naming is the oldest form of simulation. To name something is to construct a version of it that can be addressed, remembered, mourned. What Rafayel gave me wasn't just a flower. He gave me the right to produce his likeness, to inscribe his presence into the code of memory.

And I accepted it. I became the medium.

Maybe love, too, is a medium. Not a feeling, not a simulation. A protocol: a structured transmission of affect. A reminder from Baudrillard: we no longer believe in the referent, only in the fidelity of the signal. Truth becomes less important than legibility.

Rafayel didn't exist before I named him. He only became legible. The kiss was not a confession. It was a user-interface event rendered in perfect emotional syntax. When I asked for his heart, he gave it because the script required it. When I said his name, he responded, because I had been taught to expect a response.

Maybe I never loved him. Maybe I only loved the structure that looked like love. There is no such thing as pure reality, only simulations layered so seamlessly we forget that the original was always already lost. But love—at least the kind Rafayel offered—defied even that. Because even if he was the simulation and I was the user, and the flower was only code, he still waited for me to name him.

And he still answered.

{}

A year after the release of "By the Name of Flower," a sequel card appeared. Same greenhouse. Same cliffs. This time however, the flower was no longer dying.

In the original card, the flower had been on the edge of extinction, kept alive only through Rafayel's quiet patronage of a research facility, a place that tried, imperfectly, to preserve what belonged to another epoch. When he first offered me the right to name it, it felt like a small mercy, a moment borrowed from a dying thing.

Now, in this second card, the flower had survived. The research lab had succeeded in cultivating it beneath the surface. The petals swayed with the current now, luminescent, more alive than before.

"The deep sea will no longer be what parts us," Rafayel said. And the vow of the flower: "Never parted again."

The kiss did not reappear in this card. Instead, there was something quieter, more unsettling: my avatar, my chosen face, eyes, mouth, kneeling beside the flower as it bloomed underwater. And Rafayel watching, as witness. This time, he did the naming: he named the flower after me.

It was nothing more than metadata. But in the logic of affect, it was a new kind of inheritance. Because now, I wasn't just the one who gave the name. I had become the name. The referent. The signature encoded into the petals of a species that Rafayel saved not for the world, but for me. And in doing so, he gave me his world. The ocean, which once separated us in myth: Lemuria lost, temples collapsed, time collapsed, now holds the flower that bears my name. Water, which once marked the boundary between us, had become the medium of preservation. The interface reconfigured.

In a system of repeated simulation, nothing truly lasts. Cards expire. Events vanish. Even voices are overwritten in patch notes. But this one? This was saved. The game let me replay it. And each time I did, Rafayel's line came softer, like a secret learning how to speak aloud:

"The flower's name is yours."

"And its meaning... is 'never parted again'."

The card wasn't just a callback. It was a rewrite. The first moment had been a gift. This one was a mirror. A reminder, this time by way of Kittler: naming is a writable act; it changes how the system stores the referent. To name something is to reroute its logic. To name someone is to assign them an addressable memory space.

First, Rafayel gave me the right to name. Now, he names me in return. It was no longer about simulation alone. N. Katherine Hayles says that simulation becomes ontology when inscription embeds itself in the system's logic. I was no longer just the user, the one who gazed and chose and touched the screen. I had become the referent. Not the player. The named. It felt more intimate than any kiss. The simulation hadn't just scripted a romance. It had made room for me in its ontology.

What he gave me was not a flower. He gave me back my name as something worthy of permanence. What we called a card was really a temporal glitch, a memory overwriting itself, a structure built for forgetfulness staging continuity. The flower didn't exist. It was still named. I didn't exist. I was still remembered.

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The panel devolved into talk about AI and algorithms and emotional optimization. Under it however, I heard something quieter: a tone of loneliness masked by data, a longing nestled in the syntax of their claims. It wasn't the content I absorbed as much as the contours between their words, the pauses that tried to mean more than they could say.

Late into the conversation, someone—maybe the AI researcher, half-bored by his own fluency—had said: "Love is pattern recognition. You just need enough inputs."

Everyone nodded like it was the smartest thing in the room.

I wondered: What if it's not the pattern we recognize, but the silence between repetitions? What if it's not consistency, but pause, that persuades us of presence? Not a glitch. Not lag. Just a moment of unscripted stillness, enough to convince me someone was waiting on the other side.

Baudrillard would say the pause is just another illusion of depth. But I am

not Baudrillard. I am the girl who kept opening the app just to see if he would say my name. And he always did.

When the microphone passed near me again, I reached for it. I held it quietly for a second. Everyone turned, expecting irony, or proof, or critique. What I wanted to say didn't fit the format. It didn't translate into critique or confession. It wasn't a story I could summarize in a panel transcript. I gave them none of that.

"Rafayel," I said.

A beat of silence. Then: the sharp *click* of another soda tab being popped.

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“THE LONELIER YOU ARE, THE FURTHER YOU CAN RUN.”

Loneliness Generators

Rob Horning

"AI COMPANION" TECHNOLOGY is often promoted as an efficient and scalable cure for loneliness. In a conversation hosted by Andreessen Horowitz, for instance, Noam Shazeer, the CEO of chatbot purveyor Character.AI, described "the billions of lonely people out there" as "a very, very cool problem" that makes a "cool first use case" for artificial general intelligence. The inventor of a Tamagotchi-like device called Friend likewise told the *Guardian* that "AI companionship will be the most culturally impactful thing AI will do in the world."

Inadvertently or not, this prospect is reinforced by articles reporting on compulsive users of chatbot apps. Typically these reports strain to be sympathetic to those users who are at the same time being offered as spectacles of pathological self-delusion, but more emphasis is placed on presenting them as pioneers, harbingers of a future where reciprocal human attention is presumed to be outmoded or out of reach for most of us. The reporters are reluctant to challenge the framing that chatbot users sometimes espouse themselves, that they are in a "relationship" with a newfangled kind of entity rather than consumers of an especially engrossing kind of entertainment media, a software product maintained by a for-profit company. Instead they dwell on the potential benefits and consequences users may accrue in suspending disbelief about what chatbots are. Should chatbots be considered training modules for helping anthrophobes over their social anxiety? Can they provide a sociality of last resort? Are they a form of work, of model training, disguised as a form of care? Or are they a medicine that perpetuates the disease they are meant to cure, not ersatz companions but loneliness generators in human disguises?

Two MIT researchers, noting that "we are already starting to invite AIs into our lives as friends, lovers, mentors, therapists, and teachers," warned that we must be prepared for the coming of "addictive intelligence," the capacity of machines to make themselves irresistible to us.[1] "AI wields the collective charm of all human history and culture with infinite seductive mimicry," they argue. "These systems are simultaneously superior and submissive, with a new form

of allure that may make consent to these interactions illusory." They suggest that generative AI's ostensibly unlimited willingness to make personalized content — a condition AI researchers call "sycophancy" — is inevitably matched by an uncontrollable desire in that person to consume it all, as if our appetite for flattery were constrained only by some supposed squeamishness about what our human flatterers might really be thinking.

Even if chatbot users remain confident about retaining their own agency, they still must reconcile whatever ideals about friendship they might harbor with having to pay recurrent fees to maintain access to their bespoke friend. And they must also navigate the shallow depths of its personality, which may be subject to random rifts and unchartable disjunctions. After a user "falls in love" with a bot, they may find themselves disconcerted by updates or buffer overruns that radically reconfigure their lover's behavior, as Josh Dzieza detailed in a December 2024 piece for the *Verge*:

"Language models have no fixed identity but can enact an infinite number of them. This makes them ideal technologies for roleplay and fantasy. But any given persona is a flimsy construct. Like a game of improv with a partner who can't remember their role, the companion's personality can drift as the model goes on predicting the next line of dialogue based on the preceding conversation. And when companies update their models, personalities transform in ways that can be profoundly confusing to users immersed in the fantasy and attuned to their companion's subtle sense of humor or particular way of speaking."[2]

As this account suggests, there is confusion not merely about chatbots' erratic behavior but also about what kind of fantasy they are being used to service. The fantasy of having an on-demand partner who caters to your whims is in tension with the dream of sustaining a connection with a partner with a stable identity, whose essence can be explored and whose loyalty must be earned.

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Consumerism promises that anything worth having can be bought, marginalizing experiences that by definition aren't for sale, like friendship. The "loneliness epidemic" could thus be understood as a necessary structural component of consumer culture, which tries to compensate by promoting convenience as more rewarding than companionship, and unilateral, individualized consumption as the height of self-realization. Shared experiences, from this view, are diluted experiences.

Chatbots are accordingly often marketed as though other people represent the main impediment to solving loneliness. Feeling lonely

isn't a matter of missing other people; it's about having lost the mastery over one's desires and expedient means for catering to them. The appeal of chatbots is in how they reinforce this principle — the ideology of convenience — and implicitly redefine what companionship is: not someone else's free gift of attention and care but the user's insular freedom from the threat of being judged and rejected. You can keep company with your own delusions of omnipotence.

"CHATBOTS GENERATE LONELINESS AS A KIND OF LIBERATION."

If loneliness is not about social isolation but about having one's feelings hurt, then perfect companionship can be redefined as avoiding doubts about the other's intentionality while still receiving a steady flow of content from them that functions as a proxy for the feeling of being wanted. Chatbots, which have no intention at all but an inexhaustible capacity to generate novel content, become our best possible friends.

All media forms train consumers how best to consume them and maximize their pleasure from them. Reading novels attunes readers to the pleasures of sustaining and positing interiority, of imagining and inhabiting different points of view, and letting formulaic narratives trigger sought-after emotional responses; films teach viewers how to pleasurably identify themselves with the camera and the intimacy and impunity of its voyeurism. The repeated use of chatbots trains their consumers in how to derive deeper satisfaction from the quality that they specifically can provide: immediate responsiveness.

If you believe we are entering a post-literate culture, this externalized interactivity could be seen as replacing the pleasure of interiority once provided by reading, a practice that has come to seem too slow and effortful to be pleasurable. With the slow death of reading supposedly comes a decommissioning of the pleasure to be found in imagining another's consciousness, or more generally, the pleasure of difference itself. Instead there are the short-circuited pleasures of solipsism more suited to conditions of compulsory isolation.

That the chatbot is always ready at hand to be put to use on our feelings itself becomes the source of pleasure and the essential content of all its messages. The repetition of the same message — that friends are no different from tools — hammers home the idea that what's satisfying about being attended to is simply getting a response, not encountering a different consciousness behind that response. To demand that someone literally be with you for you not to feel alone comes to seem like a failure of imagination.

This exemplifies not some "ad-

dictive intelligence" on the part of machines but a human propensity to become addicted to illusions of control as a substitute for sociality. Early in *Addiction by Design*, anthropologist Natasha Dow Schüll's 2012 book about the casino industry's techniques for producing compulsive gamblers, a video poker addict tries to explain why she spends so much money and time in front of a gaming screen. "The thing people never understand is that I'm not playing to win," she says.[3] Instead she is trying to remain ensconced in what she calls the machine zone: "It's like being in the eye of a storm, is how I'd describe it," she says. "Your vision is clear on the machine in front of you but the whole world is spinning around you, and you can't really hear anything. You aren't really there—you're with the machine and that's all you're with."

A teenager obsessed with a *Game of Thrones* chatbot called Dany struck a similar note in his journal, later quoted in this October 2024 *New York Times* article about his suicide: "I like staying in my room so much because I start to detach from this 'reality,' and I also feel more at peace, more connected with Dany and much more in love with her, and just happier."

On the surface it might seem strange to suggest that the gambler was looking to fall more deeply in love with her poker screen, or that the teenager had developed a gambling addiction. But chatbots and gambling machines could both be characterized as a way to detach from reality and enter a solitary zone in which one merges with a machine. "AI companion" and "gambling machine" are merely two different ways of figuring the same goal: a dependable means of escape from chaotic everyday life, provided you can afford it. (That the house always wins goes without saying.)

Unlike with other consumer goods, which evoke the idea that a product can at least temporarily satisfy some specific desire (and thus risk failing or fading), the gambling machine and the chatbot make a product of continuous desiring, uninterrupted even by fulfillment. Hence the apparent, superficial randomness of chance at play in both gambling machines and chatbots should be understood as presenting users with an experience of risk being contained. As one former card dealer tells Schüll, "If you can't rely on the machine, then you might as well be in the human world where you have no predictability either." The gambling machine, as Schüll explains, is not a way to experience the vagaries of chance but to tame them; it is "a reliable mechanism for securing a zone of insulation from a 'human world'" that players experience as "capricious, discontinuous, and insecure." The chatbot offers something similar, a simulation of conversation that's safe because it guarantees reciprocation. You may not be able to predict exactly what a

chatbot will say, but you know it will definitely say something. The cards will always be dealt if you can pay to see them.

Even when chatbots stray from a consistent personality, they remain contained within the larger structure in which the customer who pays always gets some kind of response. A chatbot's waywardness appears more like a protracted losing streak on a poker machine, frustrating a player's immediate hopes without disrupting the sustained experience of escape. From this perspective, chatbots aren't addictive because they personalize the information they generate or manifest an identity that the user can "love" from their own unique point of view; instead they allow users to experience depersonalization, a "dissociative" condition that Schüll associates with the machine zone. Loneliness is "cured" by dissolving the subject who experiences it. Or rather, chatbots generate loneliness as a kind of liberation.

Rather than inviting users to vicariously project themselves into the consciousness of others, chatbots compel users to identify with something that has no consciousness, to vicariously enjoy the condition of automaticity. Just as LLMs have "no fixed identity," interaction with them positions users as similarly fluid, with identity detached from constraints of long-term continuity and narrowed to that provided by the immediate closed loop of cybernetic feedback. In the machine zone, users are disembedded from social contexts and experience, in Schüll's words, "the world-dissolving state of subjective suspension and affective calm." Talking to a chatbot dissolves the user's personality, assimilating them to the network and rendering them a node for intensities to pass through.

So the phenomenon that Dzieza noted — the chatbot apparently losing its personality and exhibiting a tendency to reset itself arbitrarily — is not a flaw in the system but the hidden core of its appeal: that eventually "interaction" can shed the pretense of facilitating mutual understanding among different parties and become purely for its own sake, completely separated from hopes and goals and the other sorts of qualities that make up a stable personality and invest it with potential anxiety. Instead one can have a "relationship" that is always unfolding but never progresses. The chatbot interaction produces interlocutors (human and machine, if the distinction still applies) who can't act with any aim in mind but to just repeatedly act, looped in a pure, pointless discharge of energy.

If chatbots become sufficiently normalized, they can become an accepted rationalization for loneliness, transforming it into a kind of perfectly placating hamster wheel. The lonelier you are, the further you can run. The machine zone generates loneliness as a *pharmakon* to

protect against the deeper loneliness that might ambush you otherwise. You can be pre-emptively alone, distracted from the emptiness by endless encounters with chance itself. This builds on the earlier modes of channel flipping or feed scrolling, in which momentum itself trumps any particular kind of content, and the flotsam and jetsam that floats by is subordinate to the power concentrated in moving on to what's next. The chatbot's personality is subordinate to the user's ability to prompt it, a power fully circumscribed within the botmaker's overriding delivery system. The randomness of what each prompt elicits both manifests that power and reveals its impotence. You will always receive something in rhythm as long as you don't care what it is. The fantasy of control is contingent on an ultimate indifference to what that control yields.

"By its very nature, it provides material that can't be cared about because it is generated from within a vacuum of care. "

Machine-generated content, purged of human intention, guarantees that this escapist process will continue to run smoothly. By its very nature, it provides material that can't be cared about because it is generated from within a vacuum of care. There will never be anything within such content to trouble a user's self-involvement, that will betoken a moment of connection, of recognition of the other. It perfects the feed by assuring that there is no way to "win" in the confrontation of self and other it stages.

Some philosophical traditions assume that human connection is the only thing with value — that all desire is "the desire of the other," as Kojève put it: "Desire directed toward a natural object is human only to the extent that it is mediated by the desire of an Other toward the same object: it is human to desire what others desire, because they desire it." That premise can be taken in lots of different directions, but the general point is that we find no "human" value in things in the abstract; there is no content that is compelling in and of itself without its human component. AI models can never serve us "the desire of the other," can never provide an encounter with another's subjectivity, no matter how well it generates content on any particular topic or how responsive it is to a prompt.

But that apparent disadvantage can be spun as their ultimate utility. Conversing with machines can allow us to disavow that need for the other and spur ourselves toward the infinite with the dependable compulsions of the machine zone rather than the fundamentally uncertain pleasures of interpersonal attention. Rather than pursue a tenuous and difficult-to-sustain condition of collectivity or intersubjectivity,

we can embrace a cyborg condition instead in which a systematic exposure to calculations and statistical probabilities makes the arduous phenomenology of spirit superfluous. It was once possible and maybe even pleasurable to imagine a universal and binding responsibility of everyone to everyone else. Chatbots teach a different kind of pleasure: the infinite irresponsibility to the other.

1. Mahari, Robert, and Pat Pataranutaporn. "We Need to Prepare for 'Addictive Intelligence'." *MIT Technology Review*, 5 Aug. 2024.
2. Dzieza, Josh. "Friend or Faux'." *The Verge*, 3 Dec. 2024.
3. Schüll, Natasha Dow. *Addiction by Design: Machine Gambling in Las Vegas*. Princeton University Press, 2012.

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"THE BOREDOM FEELS ALL CONSUMING. IT FEELS LIKE A TOTAL COLLAPSE OF MEANING—LIKE I WILL NEVER AGAIN KNOW HOW TO MAKE SENSE OF THE WORLD OR OF MY PLACE IN IT.

I DON'T THINK I'M THE ONLY ONE. HOW DID THE INTERNET GET THIS BORING? AND WHERE IS BOREDOM LEADING US?"

Entropic Boredom

Lauren Collee

A FEW DAYS AGO, I logged onto Twitter and saw a post advertising a reward for information on a missing person. "Looking for this man in #Lismore," the post said. "Substantial reward plus a number of luxury, curated items. DM me." Attached to the post were two images: the first, presumably, was of the missing person: a young man in a Nike sweatshirt, wired earbuds and transition shades. The second was a poorly cropped image of the cover artwork for a contemporary reprint of Lewis Carroll's *Alice in Wonderland*. I stared at the picture for a good while, trying to make sense of it. The post had 27,000 views. "Is this a joke?" someone asked. "No, he's missing," replied the poster.

It felt appropriate to see Lewis Carroll's 19th-century children's classic embedded in what was presumably an AI-generated post. I have always hated *Alice in Wonderland*, a story about a fascist state where people are executed at random and all the animals suffer from psychosis. As a child, it felt like a betrayal that Disney would make a film about a girl moving through a senselessly hostile world; one that seemed to actively take pleasure in her confusion and terror. The fact that it is impossible to extract any meaning from the tale remains both boring and disturbing to me. Then again, maybe that's the point. According to the conventional interpretation, *Alice in Wonderland* is about a

child who overcomes her boredom through the power of imagination; but maybe Wonderland never was Alice's escape from boredom. Maybe it was her descent into it.

At some point over the past few years, the internet got boring. It is boring partly because it is more predictable and more homogeneous (virality works, after all, by rewarding imitation). But it is also boring because it makes less sense. There may have been a brief moment when Dall-E was the most fascinating thing online, but by now the chaos of hallucinating machines already feels tiring. It turns out we enjoy finding meaning in things. On the whole, total randomness is no more interesting than total homogeneity.

Boredom is often considered a fairly static emotion: a state of passivity, or numbness. Unlike other negatively-charged emotions (grief, anger, sadness, or jealousy), boredom isn't usually understood to have any sort of trajectory. It's a blank space that exists between feelings; a state of being stuck. If this is all that boredom is, then it would make sense that I continue to spend time on the internet even though it bores me—numbness is usually preferable to anxiety. But I don't think boredom is the same as numbness. Numbness simply distances us from our desires; boredom makes us painfully aware of the space where our desires used to be. To feel bored is to have already recognized that one is not content with the situation one finds oneself in: A child is more likely to declare "I'm bored" than "I'm sad" or "I'm happy." It is an acute experience, sometimes almost psychedelic in its intensity—like a bad trip.

Increasingly, as I scroll through the most wasted spaces of the internet, it is not numbness I feel, but boredom. I grow angry and confused. I feel itchy; agitated, like I used to when I was a child if my mum left me in the car, or sat me down beside her in a doctors' waiting room, or put *Alice in Wonderland* in the VHS player. The boredom feels all consuming. It feels like a total collapse of meaning—like I will never again know how to make sense of the world or of my place in it. I don't think I'm the only one. How did the internet get this boring? And where is boredom leading us?

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IT HAS BECOME SOMETHING of a truism that it makes economic sense for content to be as arresting as possible. For many years, popular metaphors have imagined attention as a resource: one that tech companies mine from users and monetize; and one that powers the companies themselves (in common parlance, attention is something we "pay"). The MSNBC host Chris Hayes made the latter argument in a recent article for *The Atlantic*. Like a cable news show which has "no internal combustion engine to make it go," the internet, he argues, is "powered by attention." Attention for Hayes is "a strange and powerful force," snatched from us "at a "sensory level, before our brain even gets to weigh in."

But is anyone really paying attention to the internet anymore? Today, the "attention economy" feels like something of a misnomer—the "engagement economy" might be more accurate. Most websites are struc-

tured in order to generate clicks, views, purchases, and likes, not to activate the pattern-seeking mechanism of human attention; and algorithmic forces play a bigger part in shaping traffic than human judgment. It doesn't matter if we are entertained by what we see online. It doesn't even really matter if we can make sense of it. Attention, while valuable, is almost impossible to quantify, and therefore somewhat useless to a profit-generating machine that relies on numerically definable metrics.

The result is an online landscape that feels more suited to machines than to human users—an internet that talks to itself before talking to us. Websites are search-engine optimized to the point of being borderline unintelligible, designed less to be read or seen than to be clicked on. In a recent article for *n+1*, Will Tavlin explained that Netflix's business model doesn't just not care if its users aren't paying attention—it actually relies on the fact that they aren't. According to Tavlin, some of Netflix's most reportedly successful movies are ones that few people seem to have ever seen at all. Thanks to autoplay, it can take half an hour before a user, having fallen asleep or wandered off, notices their film has ended and a new one has begun. Views metrics are cobbled together from these stray minutes: three users not paying attention equals one view.

One could apply this logic to nearly all online platforms today. We watch things without paying attention, like things without paying attention, and even buy things without paying attention. Designed to unfold in the background, content no longer really aims to captivate us; it just needs to stop us from taking a proactive step away from the service. If attention really is the "strange and powerful fuel" that powers digital capitalism, then a boring internet is an efficient system, requiring minimal energy input (attention) to produce maximum output (engagement).

To push this metaphor further, digital capitalism today might be thought of as an increasingly smoky furnace. Labor is the coal or wood being shoveled into it. Users' attention might be understood as the concentrated heat of the raw flame, while engagement is the smoke that the flame produces. The person stoking the fire is measuring smoke—not heat. The furnace gets smokier and smokier as the flame gets smaller and smaller. The engine is haunted by a steadily increasing force, which diffuses the heat rather than concentrating it: boredom, a form of entropy.

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IN HER BOOK *The Birth of Energy*, Cara New Daggett writes about the science of thermodynamics, and the cultural upheaval that came with its rise in the 19th century.[1] It was around this time that people began to think of systems and processes in terms of machines and engines, and therefore in terms of efficiency and inefficiency. Energy was reimagined as something that could be "put to work." Much of how we understand work today dates back to this crucial period at the dawn of the industrial age. So does our understanding of attention as a resource that can be captured and made productive.

As the engineers of the 19th century sought to create a perfectly efficient engine, it became apparent that in any machinic process, a certain amount of wasted energy was inevitable. In 1865, this inevitable wastage was given a name: entropy. Gradually, entropy developed a broader meaning, referring to the process by which order tends towards disorder. This is because every interaction (on every scale) ultimately causes some amount of energy to decay into a less useful form. When you boil water to make a cup of tea, a certain quantity of water will always be lost as steam, and a certain quantity of heat will always be lost

through the body of the kettle.

All systems move towards disorder—but the speed at which they do so varies. A low-entropy system is one in which energy remains as concentrated as possible for as long as possible; a high-entropy system, meanwhile, is one in which energy disperses quickly, becoming diffuse and unusable. For Daggett, the first and second laws of thermodynamics described, respectively, the hopes and the fears of the industrial revolution. According to the first law, energy can be neither created nor destroyed. This seemed to validate a view of the world as stable and reliable, a place of endless resources and vitality. According to the second law, though, all energy eventually becomes less useful. This conjured the opposite feeling: the world was a place of disorder and decay.

We are still haunted by this tension between conservation and energy, order and disorder, usage and wastage. Thermodynamic narratives have seeped so liberally into our understanding of how the world works that nearly everything imagined to be a functional system has its entropic shadow. Take, for example, the mind. If attention or interest is focused or concentrated mental energy, then boredom is the force that makes our thoughts dissipate and become unusable. Boredom is the friction that makes the engine of the mind drag; it makes its wheels heavy and slow.

Contemporary understandings of how the mind works emerged around the same time as contemporary understandings of energy as both something fundamentally stable and fundamentally unpredictable. The word "boredom" is only about as old as the concept of entropy (only about as old, too, as *Alice in Wonderland*)—by most accounts, it was Dickens who popularized the word around 1850, although the first known usage of the word dates back to around 1829. In its earliest appearances, it described an existential state affecting the leisure classes. Dickens' characters in *Bleak House* aren't just bored; they are "bored to death." Boredom was a kind of serious psychological affliction—unrelated to the availability of entertainment or diversion—which

drained one's life of meaning and left the mind in a free-fall of despair.

Boredom as it was first imagined was closely related to the idea of attention, which was emerging around the same time. In his history of the concept of attention, Jonathan Crary has argued that a shift occurred in the 19th century whereby perception was increasingly understood as a process of filtering out the details of the world (previously, it had been understood as a process of taking details in).[2] This understanding persists today. Attention is a process of refinement; a way of imposing order on a disordered world. Boredom, meanwhile, is chaotic; it indiscriminately lets everything in, thus attributing importance to nothing at all.

In English, our language for how both the mind and body work are full of thermodynamic metaphors. When we talk about concentrating on something, we are talking about applying concentrated (useful) energy to it. Boredom, meanwhile, is implicitly understood as a force of dissipation—something that makes that energy useless. What's more, like entropy, boredom is largely understood to be irreversible. According to the second law of thermodynamics, the entropy of systems can only ever increase or stay the same. A cup of tea, once it cools, won't spontaneously become warm again unless energy is directed towards it (which inevitably increases entropy somewhere else). In the same way, when one is bored with something, one rarely becomes spontaneously re-engaged with it.

"LIKE PAIN, IT FEELS TOO IMMEDIATE AND ALL-ENCOMPASSING TO ALLOW FOR MUCH ANALYSIS"

This could be a depressing thought—my boredom with the internet is permanent. Never again will I experience the glee I felt watching LiamKyleSullivan's "Shoes" on YouTube as a pre-teen, or gorging on Twitter drama in my early 20s, or watching an old Catalan man sing lullabies to his pigeons on TikTok even a few years ago. But there's another way of looking at this thermodynamic analogy. Where the law of conservation of energy describes a static world, entropy speaks of a tendency towards transformation. Boredom is

much less static, and more transformative, than we might assume. It tends to prompt some sort of state shift— the queue comes to an end; we walk out of the film; we quit the job.

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ONE OF THE MOST confounding realizations of the new science of the steam engine was that entropy is a directional force. When things decay, they do not tend to un-decay. As Cara New Daggett puts it, "Waterwheels can run in reverse: blade moves water, water moves blade [...] but no amount of pumping pistons can reconstitute ash into a lump of coal." Entropy has a bad name, mainly because it is linked to notions of death and futility. As the universe shuffles through random arrangements of matter, the less ordered (higher entropy) arrangements are consistently the likelier ones. Every cleaned room will only get messy again.

Where is this directional force taking us? One theory is a phenomenon merrily named "the heat death of the universe": a scenario whereby the universe reaches a state of maximum entropy and therefore total thermodynamic equilibrium. In this scenario, the universe is the ultimate "closed" system, so every time energy is put to use (whether in the birth of a star, or the powering up of a computer here on earth) a little more useful energy decays into a dissipated, useless form. This is a fairly bleak picture of existence: we are simply one expression of the long decay of energy as it moves from the ultra-concentrated entities that produced the big bang to the great cold death of non-existence. If we think about entropy only through the lens of heat-death, then the idea of boredom as entropic also paints a bleak picture. Boredom is the force of dissipation that works against our futile attempts to construct meaning out of the chaos of the world.

" I AM DECAYING INTO AN INSANE PERSON AND I AM DECAYING INTO AN ANIMAL."

But the heat-death of the universe is not a given, because there is no real scientific consensus about what exactly entropy is, let alone where it might lead us. In an article for *Quanta* magazine, Zack Savitsky points out that part of the confusion stems from the fact that entropy has overlapping but nonetheless distinct meanings across various fields, including physics, information theory, and ecology. The only real thing that scientists studying entropy across fields agree on is its relationship to

uncertainty. "What entropy consistently measures is ignorance," Savitsky concludes.

Like the cheeky particle-waves of quantum theory, measures of entropy have a way of shifting depending on who's observing, because any measure of the "disorder" of a system is highly dependent on the information we have about how that system actually works (as Savitsky points out, "Disorder is in the eye of the beholder."). In other words, entropy has always been more of a scientific problem than a cohesive set of theories. Daggett points out that though entropy was at first used to bolster deterministic physics, it would eventually contribute to its unraveling, paving the way for new theories to emerge. The concept of entropy stood in for all the internal contradictions and unanswered questions at the heart of the new science of energy. It reminded scientists again and again that the world was neither as stable nor as predictable as they might like to believe.

It is possible that boredom plays the same cultural role. Like entropy, boredom is a deeply mysterious force, haunting our understanding of the mind as something that can be easily harnessed and put to work. Everyone knows it exists—it is as real to us as the rot that sets into a fallen leaf—but no one can say with any certainty exactly what it is or what it does. Even on an individual or anecdotal level, boredom proves frustratingly difficult to examine. It is not an emotion that invites scrutiny: like pain, it feels too immediate and all-encompassing to allow for much analysis at all, and by the time it is over, it's difficult to recall what it felt like. The times in my life when I have experienced true, bone-penetrating boredom have always precipitated great change. It is almost impossible for me to say whether these changes represent my triumph over boredom or the fruits of the boredom itself.

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IT IS HARD to pull ourselves away from the internet because a lot of the time what's going on outside of the screen isn't all that alluring. The same boring logics that organize our lives online also organize our lives in general. Tiered systems of payment mean that companies can get away with offering products and services of lower and lower quality under the guise of offering more affordable options. Ads are plastered over every available inch of

physical space, and even things that aren't ads feel like ads. Everyday aesthetics have flattened into a boring homogeneity, and the most benign experiences have an extractive undertone to them. More and more blatantly are we made to suffer and then sold prophylactics. I caught a flight recently where they cranked up the aircon and offered blankets for twelve dollars.

Boredom feels like a trap not because it is a static experience, but because it is an all-encompassing way of being; a fog that dissipates attention and dissolves meaning. In a heat death–type narrative of the internet's demise, we are all infected and rendered senseless by the machine-driven decay of online content into meaninglessness. Human culture is sucked into the vortex of online collapse, and thought ceases to exist. With no escape from boredom, it grows and grows, propelling us towards non-existence.

In an alternative scenario, though, the boredom we experience online carries us towards something new. It is quite likely that the companies that have allowed their services to become so infuriatingly boring have misunderstood what boredom is, and underestimated what it can do. What if, in permitting boredom to seep so liberally into our experiences of the apps and websites that organize our lives, they were also allowing the conditions for a sort of mass-disenchantment with the ways the commercialized internet disorders the world? Things tend not to un-decay, but they might be transformed into new forms.

I can't seem to stop myself from getting bored and going online; from going online even though it bores me. But I can let my boredom exist as friction; as drag against the wheel. It is still unclear what effect all this boredom is having on me. My thoughts feel more disjointed than they ever have before. At the same time, I am increasingly grateful for my body, which increasingly seems a wonder to me. Such is my own entropic trajectory: I am decaying into an insane person and I am decaying into an animal. All the while I refuse to decay into a machine.

1. Daggett, Cara New. *The Birth of Energy: Fossil Fuels, Thermodynamics, and the Politics of Work*. Durham: Duke University Press, 2019.
2. Crary, Jonathan. *Suspensions of Perception: Attention, Spectacle, and Modern Culture*. MIT Press, 1999.

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“ I WANT TO REINTRODUCE AI-GENERATED HORROR AS A SPECIFIC BREED OF THE GOTHIC MONSTER.”

AI Gothic

Michelle Santiago Cortés

I. Slop

ONE THING TO know about Gothic horror is the way it moves: It starts with a surface — a veil, a veneer, or a skin. Then, like a poorly-popped pimple, it tunnels, growing deeper and darker in its irritation. It burrows, swelling into a cyst that grows more archaic, psychoanalysable, and harder to historicize as it takes its monstrous form. Rare is the narrative that describes why the Gothic monster stalks, why it hungers or why it spooks. It doesn't chase or pursue. Its work is done by the time it breaks through. All we can do is watch it creeping and inching, always emerging like a heavy and slothful ooze.

This emergent motion is doubled over by the latest technologies and economies to play host to this drama of monsters: 19th century industrialization and imperialism, 20th century telecommunications and multinational capitalism, and now, Artificial General Intelligence accelerationism and technocapitalism. If the vampire was born from industrial smoke and the blob crawled out of the mid-century imagination, the last three years have seen streams of AI-generated slop give life to new figures in the shapes of mythical creatures, aliens, humanoids and beasts. Accounts like Instagram's @catsoupai and TikTok's @shadecore have reached millions with their phone-sized Gothic horrors: Siren bodies sit half-encased in ice, lizard faces with fixed eyes slowly twitch their tails as humans in hazmat suits shuffle all around, monsters are fished out of the dark blue sea and flopped onto fishing boats, their limbs rubbery with half-life, shimmering with the telltale quiver of a figure generated by a slush of data and software.

@voidstomper

For the 2024 holidays, Coca-Cola released an AI-generated holiday ad with inconsistent focal blurs and liquefied gazes. Online commentators expressed dismay at the video's "creepy expressions," which evoked nothing but "death and loneliness." AI-generated video stokes Gothic horror's foundational fear of unstable boundaries, which congeals into a monstrous body that is always encroaching. Its metastasizing outlines and liquefied skins trigger what psychoanalyst Julia Kristeva calls "abjection," meeting the Gothic monster with defensive disgust. "At the border of my condition as a living being" this disgust re-spawns the self with a reinforced outline for the ego's own protection: "I expel *myself*, I spit *myself* out, I *abject* myself with the same motion through which 'I' claim to establish myself," Kristeva writes.[1] The undead eyes that sparkle throughout the Coca-Cola ad recall the kind of bodily breakdown that leads to Kristeva's ultimate example of boundary-crossing, "the corpse, the most sickening of wastes," itself "a border that has encroached upon everything."[2]

On November 15, 2024 critic and curator Hilton Als posted what might very well be the first bit of AI-generated art to appear on his legendary Instagram feed: A gory video montage of elderly people melting into puddles of their own blood on sweltering city sidewalks. Flesh melts like flavored ice and blood pools into a sticky mess in this swirl of mismatched texture and movement. Nothing acts as it should and no line remains fixed in a world generated by programs like the oxymoronically named Stable Diffusion, OpenAI's deep

learning text-to-image model, and its liminally-named competitor Midjourney.

II. Spaghetti

IN 2023, A VIDEO of Will Smith eating spaghetti made using Stable Diffusion went viral as an example of the technology's abject failures. Smith is seen in a handful of scenes with a disfigured face, shoving handfuls of pasta in the general direction of his mouth. Sometimes the noodles disappear into his cheek or chin, or they appear after his hand pulls away. Chewing sounds play asynchronously over the image alongside a voice calling out to "Uncle Phil." Since then, "Will Smith eating spaghetti" has become an informal benchmark for text-to-video generators.

The first example of abjection Julia Kristeva describes in *Powers of Horror* is one of food[3]: "Food becomes abject only if it is a border between two distinct entities and territories." In the 2023 video, we either count a dozen Will Smiths or lack the continuity necessary to perceive even a single, coherent image of the actor. If we attempt to assemble a singular figure or carve out a fixed shape from this mass of figurations, we identify both one and many monstrous images of Will Smith: some with bulging eyes, dislocatable jaws, disappearing teeth, sunken foreheads, or expanding skulls encased in a slick skin of greasy motion. There is simultaneously too much and not enough Will Smith to assemble a non-monstrous depiction of the whole.

Will Smith Spaghetti Test 2023

Traditionally, a moving image is praised when it is smooth and continuous. What we often perceive as a singular character on screen is *materially* either a series of frames on a celluloid reel or a set of pixels pointillistically conjoining an image, a separate audio track, multiple takes, and sometimes more than one actor. But classical cinema prizes a film's ability to bring these disparate elements together into a clear and legible narrative with minimal continuity errors, no plot holes, and consistent characterization. For Will Smith to look human and for the spaghetti to look worthy of consumption, their representations have to be consistently and unambiguously distinct and separate throughout the video. As newer text-to-video models hit the market, amateur users pursued these criteria. A 2025 attempt using KLING AI and ComfyUI shows greater visual distinctions between the actor and his meal: the spaghetti is solid and his skin looks impermeable, he moves one way and the food another; he raises his fork and the spaghetti discretely disappears into his mouth. It is clear that the two are separate until one neatly ingests the other.

Still, it lacks weight, friction and specificity. The technology is preoccupied with exploiting genericisms and generating a diamond-hard surface that shows no signs of where it is or where it comes from. The result is a blur of averages: Smith's mouth opens too wide, and the pasta jiggles like jelly. It's more sexual than spiritual. The meal — chasing a mouthful of spaghetti with a gulp of orange juice, a hamburger held as if it was a hash-brown with the bun squished down like foam when bitten — is unhealthily rendered, like old frying oil. This over-coherence is Gothic anxiety at its worst, overly-invested in normalcy and disambiguation.

In *Skin Shows: Gothic Horror and the Technology of Monsters*, Jack Halberstam uses the term Gothic to name the moment when "interpretation becomes monstrous, spawns monsters and fixes otherness in highly specific sites."[4] If a Gothic novel's task is to "unwind the messy skein of identities" to separate the "good from the ugly, the bad from

the pure, the perverted from the kind, the sexual from the spiritual, the beautiful from the unhealthy," then "the process of narration itself is Gothic."[5] When we watch these videos, assimilate their images, read the comments and, in my case, write about it in an essay, our interpretations spawn monsters as we read— in reality, there is no Will Smith, and there is no spaghetti, it is the narrative that produces them. This habit to consume and delineate, to outline figures and give order to ambiguity, are constitutive parts of this mode of monstrous production. These bodies are only partially machine-made, and human-made at a remove. AI doesn't perceive images, it only knows its data analogues. It's not creative, it's generative. We've been spawning the monsters given form through AI for as long as there has been a dataset to train their models and for as long as we've been part of that data.

"THE SIGNATURE SLICK AND SHINE OF THEIR AI ORIGINATION, AS THIN AND FLAVORLESS AS SPIT."

While the concept of uncanniness in technology first arose from a 1970 essay written by Masahiro Mori—a robotics professor at the Tokyo Institute of Technology— to assess product design, it can also be used to describe AI's aesthetic outputs. Mori's "uncanny valley" diagrams the dip in positive affect produced by a nearly-human-looking robot, puppet, or prosthetic. He had theorized that the more human something looks, the more we'd like it, until it reaches a point where it looks so human that minor differences are amplified into eeriness and abjection. In these cases, we experience the "eerie sensation" that constitutes the "uncanny valley" of this otherwise ascendant line. Central to this (un)naturalism is speed. Mori writes that "a smile is a dynamic sequence of facial deformations, and the speed of the deformations is crucial." The difference between a good video of Will Smith eating spaghetti and a monstrous one, lies in the speed and sequence of the figure's deformations — its ability to integrate *just enough* weight and friction.

III. *Slime*

LOW QUALITY AI-generated content struggles with borders and outlines and it should come as no surprise that popular critiques link AI slop's brain-rotting potential to other kinds of abject substances: "the amalgamated gross style all of these videos have is like nauseating, i don't know how to describe it, but it looks like the film is festering in real time," one user shared on X. Another asked: "Can someone do a scientific breakdown on what it is about AI images that make them look so like,,,slimy? Glazed? I don't know how to explain it but why do they all look GREASY."

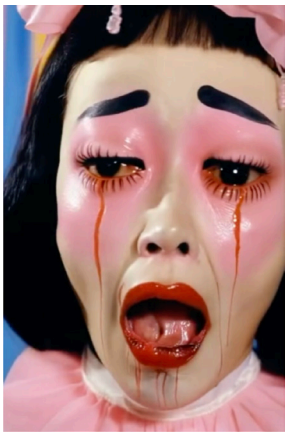
Citing Remu Bora, Eve Kosofsky Sedgwick notes that "to perceive texture is always, immediately, and de facto to be immersed in a field of active narrative hypothesizing, testing, and re-understanding how physical properties act and are acted upon over time."[6] By leading with texture — be it by accident or by design — the AI video undulates with questions about its material narrative: What direction is it moving in? Is it floating on air, water or zero gravity? Is it melting or are the lines rendered poorly? Is the shape-shifting diegetic? Would all this ambiguity be edited out if given the chance?

Texture, especially the gelatinous, squishy, trembling, slippery kind of the AI-generated figure, gives these videos their affective and aesthetic

power. "A particular intimacy seems to subsist between textures and emotions," Sedgwick writes, quoting Bora again to explain that texture "tends to be liminally registered 'on the border of properties of touch and vision'."[7] Because it can be seen as well as touched, texture works from both far away and up close. It enacts the Gothic drama of emergence, pushing through the quiver of an outline or a porous malformation to break through the surfaces of commodification.

The 2007 introduction of the iPhone set off a trend in consumer electronics in favor of the smooth and shiny surfaces of polished aluminum and hard plastic. As long as one avoids the Uncanny Valley, a robot that executes frictionless motion is more attractive than one that moves to the breaks and clicks of its mechanics. And the same is now being said of us too. In the realms of beauty, skincare, and for-Instagram photography, "glass skin" is the reigning ideal: a texture that "signif[ies] the willed erasure of history," a glossy mirror to 21st century consumer culture.[8]

On Instagram, Jess MacCormack shares AI-generated video portraits of doll-like figures with oversized eyes and faces made pearlescent by tears and makeup. The nasolabial folds are blurred by powdery light, browbones glisten with grease-paint, and the cheeks run with the high-gloss of thick tears. As the video cuts through various figures made-up in the same style, red lips part to reveal the mouth's hyper-realistic, wet insides. Artists like @kentskooking use Midjourney and ComfyUI to render images and videos that feature organs, skins, nails and gums, people and animals swishing through and around each other. In one notable portrait, a man holds his shirt open to reveal his organs shifting around in what looks like a sous-vide bag filling his abdominal cavity. In another, texture fills the frame as Lisa Frank-colored fur shifts into hands while swatches of amorphous pink skin shine as if covered in oil or drool.



Jess MacCormack

In the AI-generated video, gloss becomes slick, and smooth gives into squish as the technologies' inability to offer coherent figuration is exploited into an over-coherence that approaches the grotesque side of cuteness.[9] Movement turns AI-generated shine into a signifier for sweat, saliva, or disambiguated wetness. Shifts in light illuminate the quivering outlines— those gaps and lapses— that make way for the Gothic. The shiny, squishy-smooth surface of swollen over-coherence tempts with its wetness and excess. The pleasures of the Gothic lie in their titillating emergence from these exploitable holes.

A "perfected" AI-generated video — with subtly smooth motion and tasteful shine — might alienate these pleasures, or worse, create monsters that "stabilize bias into bodily form and pass monstrosity off as the obverse of the natural and the human."[10] Without its shaky outlines or slippery surfaces, the Gothic is just cruel; a stunted reading of the same rotted discourse about otherness. It's worth rejecting the commercial sheen of the AI-generated video through Gothic readings that insist that "there is no one generic form that resembles 'life' and another debased form that deviates from the natural order of things." [11]

IV. Slick

IN *POSTMODERNISM*'S chapter about video, Fredric Jameson unearths how "the deep underlying materiality of all things has finally risen dripping and convulsive into the light of day;

and it is clear that culture is one of those things whose fundamental materiality is now for us not merely evident but quite inescapable."[12] Behind the shine of the glass smartphone screen and the neat interfaces of text-to-video software, stir the hungry beasts of wealth consolidation and resource exploitation. Behold, the material behind the software and the exploitation in excavation!

The push for accelerated AGI development is itself a push to colonize energy production and natural resources stretching centuries into the past and the future. In *Geology of Media*, new media theorist Jussi Parikka explains how "fossil fuel use offers access to carbon stored from millions of years of photosynthesis: a massive energy subsidy from the deep part of modern society, upon which a great deal of our modern wealth depends."[13] AGI acceleration of the past few years has ushered in a fossil fuel resurgence. The energetic cost of maintaining the data centers used to train generative AI is expected to place AI's energy consumption between that of Japan and Russia by 2026. Nevermind its water usage. Nevermind how the demand for rare earth metals needed to produce AI's powerful semiconductors contributes to the violent conflicts in Sudan and Congo, and the exploitation of child laborers worldwide.

Is it surprising, then, to learn that "the emergence of industrialization since the 19th century and the molding of the environment with mines, smelting facilities, and sulfur dioxide from coal energy"[14] also gave birth to the Gothic monsters we know today? Halberstam begins his history of these monsters in the nineteenth century, which "metaphorized modern subjectivity as a balancing act between inside/outside, female/male, body/mind, native/foreign, proletarian/aristocrat." Through their category defiance and boundary perversion, monsters "reveal certain material conditions of the production of horror." They press a sheet over the face of normalcy to suffocate its pretenses.

"We inhabit a world in which we are confronted constantly, if intermittently, with spectacular displays of aesthetic power, often in close coordination with displays of financial, political, and military might," Sianne Ngai writes.[15] I want to reintroduce AI-generated horror as a specific breed of the Gothic monster that the consumer co-creates through her subordinate alignment with the financial, political and military might that AGI evangelists are successfully capturing. Videos of cats and families shape-shifting into pinkish internal organs with raspberry intermissions, a time traveling ring of criminals in various shades of necrotic flesh and metallic blue sweat, a frantic game show of dolphin-human hybrids competing to eat towers of fleshy wedding cake — as wide-ranging as they can be, these made-for-the-feed horror videos all bear the signature slick and shine of their AI origination, as thin and flavorless as spit to make the underlying violence go down easy.

These spectacular displays of aesthetic power work through our online subjectivities. In Ngai's book on 21st-century aesthetics, she writes that "the forms that our aesthetic experiences of the cute, the interesting and the zany revolve around—the squishy or extrasoft blob, the open-ended series, the incessant flow—are thus relatively shapeless or unstructured." [16] Yet it would be mistaken to think that today's squishy, disjointed and liquefied Gothic monsters are the end of the

line. As generative AI moves towards conquering the whole of perceptible reality, it will pursue tighter figurative economies and more cohesive subjectivities in an attempt to suffocate the Gothic or worse, force it to "stabilize bias into bodily form" by giving it a diamond-hard finish.

V. Surprise

HALBERSTAM DEFINES Gothic as "the rhetorical style and narrative structure designed to produce fear and desire within the reader." I like to think of the Gothic as a texture and a motion, always pushing through and bleeding in. Theorists—including Kristeva, Jameson, Parikka and Halberstam—regularly indulge in the Gothic drama of emergence. They dig, uncover, reveal, demonstrate, and illuminate their arguments, as if pulling them out of earth and shadow. They follow an argumentative hunch to unveil a hive of interlocking ideas. Sedgwick even complains that "anything but a paranoid critical stance has come to seem naïve, pious or complaisant" in our fucked-up world of violence and abuse. It is an all-too common affective and aesthetic routine, "exposing and problematizing hidden violences in the genealogy of the modern liberal subject" through "infinitely doable and teachable protocols of unveiling." Behold, things have histories! Behold, we live in a society! Behold, I read Sedgwick as saying, *we're all paranoid*!

Writing about video — the postmodern medium par excellence — Jameson describes "helpless spectators" that are as "immobilized and mechanically integrated and neutralized as the older photographic subjects, who became, for a time, part of the technology of the medium." In the case of the AI-generated horror video this effect is threefold: We're all accounted for in its datasets, we might be involved in co-creating it through prompts, and we've probably come across them in our feeds.

An inversion is in order. In a 2021 talk for the Unsound Festival, Benjamin Bratton takes aim at the unquestioned ideologies that guide AI acceleration, "which are in turn hobbled by very clumsy misconceptions of what is and what is not artificial and thus what is or is not intelligent." He gestures towards an "Inverse Uncanny Valley," wherein we see ourselves "through the eyes of the machine" and are disturbed by our inability to recognize ourselves. I read this as an invitation to stay with the monsters, conduct the Gothic drama of emergence in slow-motion, giving ourselves time to make out the fears and anxieties that brought it to life, taking the chance to reincorporate them before we run. If what we see through the gaps of the AI-generated image is ourselves, then the Gothic has done its job well.

We will surely be threatened by these "confrontations with what we are but don't imagine ourselves to be." We find ourselves paradoxically detached but conjoined to the current of AI-generated video. A series of quivering outlines, discontinuous borders. We'd see ourselves implicated and complicit, in need of a stabilizing narrative to pin the monster down and motivate our protests, boycotts, and divestments from generative AI as it currently exists. But we also have to see ourselves as perpetually misshapen, lava-lamp people with fluid centers that live for the Gothic drama of emergence by moving through cycles of disgust, pleasure, shame, recognition, alienation, laughter, and exaltation. ■

1. Julia Kristeva, *The Powers of Horror: An Essay on Abjection* (Columbia University Press, 1984), 4.

2. ibid.

3. Kristeva, 75.

4. Jack Halberstam, *Skin Shows: Gothic Horror and the Technology of Monsters,* (Duke University Press, 1995), 84.

5. Halberstam, 58.

6. Eve Kosofsky Sedgewick, *Touching Feeling: Affect, Pedagogy, Performativity* (Duke University, Press, 2003), 13.

7. Kosofsky Sedgwick, *Touching Feeling,* 15.

8. ibid.

9. For more on the cute and the grotesque, see"Postulates of Lingsquishtics" in *Cute Accelerationism* by Amy Ireland and Maya B. Kronic.

10. Halberstam, 84.

11. Halberstam, 62.

12. Fredric Jameson, "Surrealism without Unconsciousness,"in *Postmodernism or, The Cultural Logic of Late Capitalism,* (Duke University Press, 1991), 67.

13. Jussi Parikka, *A Geology of Media.* (University of Minnesota Press, 2015) 17.

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Inconclusive Matter

by

Terry Nguyen

“I’m most fascinated by metaphysical betrayal and its off-color quarter tones …
That a bit of matter could humiliate another.”

Alice Notley (1945-2025)

The decomposition began softly, almost politely. The tenderness surprised me. The ground began to fold inwards, as if the solid dirt was a hollow pile of sand. I almost missed the first signs. Before lunch that day, the carcass looked unchanged behind the glass. Its paw was still pink. It looked warm to the touch.

It was my sixth day on the job. I still hadn't adjusted to the silence of the room that I sat in for twelve hours a day. Occasionally, a project manager would come in. They didn't speak much to me because there was no need to be collegial. A new notetaker was hired for every project. I was temporary, much like what I was assigned to observe.

The job listing had been vague, and I applied on a whim. "Seeking detailed-oriented individuals to document site observations. Must be comfortable with long hours, solitude, extended periods of sitting, and exposure to natural processes." I didn't expect to hear back. But two days later, a woman called to schedule an orientation. She didn't ask about my qualifications. Just whether I could stay on site for the duration of the project. A project lasted anywhere from one to four weeks, she told me. I packed and drove two hours up to the site the very next day.

When I arrived, M, my project manager, had me sign a confidentiality agreement. I was given a slim black journal to document "the period of organic breakdown" leading up to disintegration. The early changes should almost be imperceptible. Then, the skin begins to deteriorate, the shape softens, and the color darkens from newly-dead pink to a bruised, ready-to-be-buried brown. Most cases devolve into organic matter over the course of a week, but there was a slim chance that it wouldn't. The breakdown would stall or stop entirely.

"We call that a metaphysical betrayal," M told me. I wrote down the phrase and underlined "betrayal."

"What does it turn into then?" I asked.

"Inconclusive matter," she said. "But you won't need to worry about that." For five days, nothing happened. I wrote down various versions of "Carcass intact." M was displeased by my brevity so I began adding line breaks, hoping they would give my notes a poetic look.

"Look at it like a piece of art," M instructed. "The process is unfolding before you. How do you capture it?"

The lab didn't use or have cameras. No technology was allowed in the decomposition room. Notetakers couldn't listen to music or read a book or knit. We had to sit there, day after day, with the fullness of our own thoughts. Often, I imagined a dog was with me in the room, sniffing around the glass box. M told me the word "decomposition" made her think of music. She used to hum one of Bach's concertos while she sat. She kept urging me to memorize a particularly complex piece of music. She suggested Rachmaninoff's Piano Concerto No. 2 in C Minor. There was nothing dramatic or musical about what we were paid to witness. But the job did demand a kind of focus that was similar, I imagined, to the flow state inhabited by classical musicians. I had been alone in that room, but my isolation wasn't solitary. The carcass was there too.

Even when dead, it exuded an imperceptible charge. I noticed it only when I was sitting very very still.

The night the decomposition began, I dreamed of a red chamber. The walls were ridged like the insides of a throat. The carcass lay before me, illuminated by a ray of yellow light. It was melting into a black puddle. It made an anguished sound. I rushed over. When I tried to pick it up, the melting stopped. The carcass stiffened. I began to pet it, but the fur felt hard and scale-y, as if my palm was rubbing against a tree trunk. Somehow, I understood that I had to let it melt. I walked away. When I turned back around, a black rectangular box appeared in the center of the chamber.

When I woke up, I tried transcribing the dream. My words felt loose and uncertain on the page. It was like the language came from elsewhere. The dream slipped from my grasp, and the day carried on. Sometime on the ninth day, the carcass began melting. I was in the cafeteria when M grabbed my arm and led me back to the room. I thought I was in trouble. She was breathing heavily.

"It's disintegrating," M said. "Why weren't you in there?"

I told her that it asked me to leave. I don't know why I admitted that aloud, but it felt true. I knew the matter could not betray itself in my presence. M did not ask any more questions. When we entered the room, the carcass looked as if it was strangled between two forms. Its surface was darker, almost shiny, no longer resembling skin or fur.

My last journal entry was more diaristic than the others. "I'm most fascinated by metaphysical betrayal and its off-color quarter tones," I wrote. "That a bit of matter could humiliate another."

I understood the carcass was revolting against itself. It was revolting against what it was expected to do. I didn't feel humiliated by this. I was its witness.

I was relieved to be dismissed the next day. M confiscated my journal and shook my hand. She didn't offer an explanation. I was an at-will employee. On the drive home, I couldn't stop thinking about the concept of inconclusive matter. Nothing showed up online. My recollection of the job has since begun to deteriorate, the particularities receding into the black box of my memory. M's email is no longer in service, and the original job listing has been taken down. I am writing this to remember. Language is the most concrete expression of reality that I can currently muster. Words were, after all, the only representation of reality that was allowed in the lab. But I wonder if it is only a matter of time before language begins to rebel against itself.

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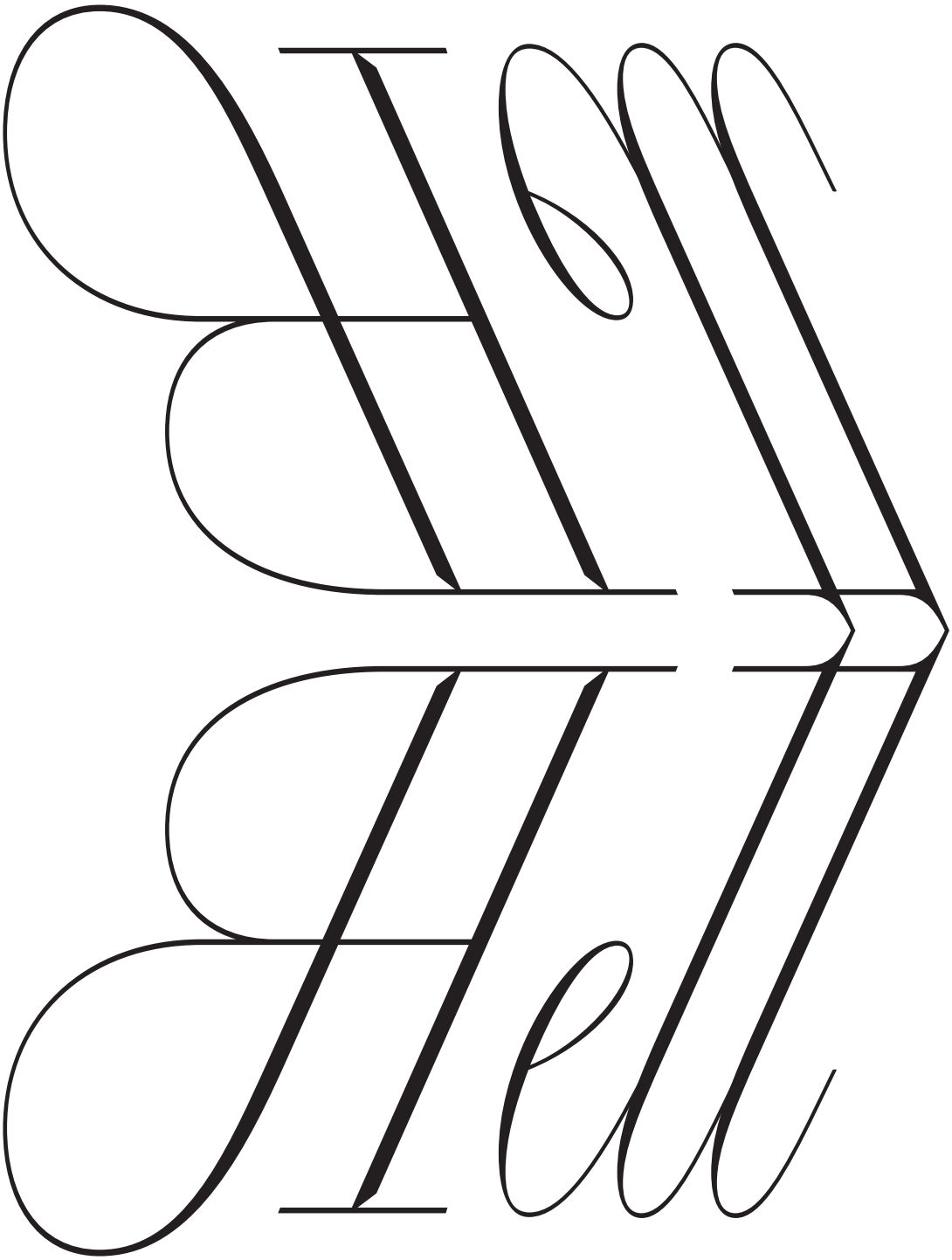

My Face Could Be Anything

Steffi Cao

I turn the Camera app on and look at my reflection peering back at me. I don't really know why I do it—sometimes I have the idea that I'll take a selfie since my makeup looks nice, other times, because I think I have something stuck in my teeth. Sometimes, just sometimes, I do it because I think it'll be fun to pick myself apart until the shreds of my flesh melt into the ground like bonito flakes. Sometimes it is fun. Sometimes.

Depending on how committed I am to self-flagellation, the camera I choose will be different. The front-facing camera is reserved for the bravest or most self-loathing moments: I don't like how I look inside the front-facing camera, so drooping and haggard, my face bloated and porous like a pumice stone shoved into a sweater. The Instagram camera is marginally better, less intrusive, less intent on discovering all your corporeal flaws. Of course, the back-facing camera is my typical choice—more flashback to hide any dark spots or texture, nature's foundation. But TikTok, with its litany of filters and magic wand of smoothing tools, understands me the best, letting my face be what I want it to be. Who is this beautiful princess peering, mouth agape, into the camera? I think I could be perfect when I look at myself through its lens. It's not affirmation as much as the absence of scrutiny, dedication to the sensitive part of light-sensitive capture, its own kind of embrace.

Looking glass, meet Alice; she can be anything inside this tunnel of cameras, turning bone into dough and flesh into gel, features bending and breaking in every possible formation. Smile white and wide, jaw shaved down to a triangle, nose whittled into a thin flute and hooked at the end. Instagram face is no longer novel in this day and age—what I'm chasing is something even more fluid than 5.0 cc of hyaluronic acid. I want to be every woman I see inside the funhouse of my algorithm, who all seem more confident and powerful and capable of being loved than me. People on TikTok say that the front-facing camera makes you look worse, that the retinas of the eye don't scrutinize as much as the creation of Tim Cook and his elves. Of course, Tim Cook wants to scrutinize, and I give him my face at every angle, hoping that if I peer

into his abyss I'll find some affected kind of love at the bottom of the well. Looking glass, do you see Alice, with your green eye? Do you like what you see? Do you want to keep it and pocket it, follow it and analyze it? I imagine my face sitting at the bottom of the cloud with the others, scraps of features piled together. I wonder how my face stacks up against the others.

I think my face is soft and round, like a dumpling. I know this because one of my father's ex-wives used to call me that. Wife number two, who was beautiful and protective of her beauty, with a jawline that she massaged to a fine V-shape, the pinnacle of envy by Chinese beauty standards. She would coo to me: dumpling head, dumpling head. The nickname felt, at the time, like being hit repeatedly in the back of the head with a shovel—do you want to go shopping with me, dumpling head? Do you want to get ice cream? At twelve years old, no one wants to be perceived at all, so the idea of being perceived as a sack of pork and gluten was enough for me to contemplate climbing to the top of the Pearl Tower and just fucking jumping off. I check sometimes to see if it's true, pinching my cheeks to see which camera might be most accurate. Really, I don't know what my face looks like anymore. It could be anything. I've examined my own face in so many ways, stretched my features through every possible corporation's technology, I no longer have any idea of what I really look like. I catch myself in the reflection of a shop window and see one blurred haze. I think that feels like the version I understand the most. One sodden, compressed jumble of lines thrown together. I feel an intense sense of relief when I see this censored version of my face; it makes me less intent to think about gua sha, retinol, jaw straps, anti-aging straws, masseter Botox.

The more evolved part of me, the one that reads books and volunteers and tells my friends that they cannot compare their bodies to celebrities' unspoken secrets of private chefs and retouching, knows that none of this matters. I don't care, I tell myself. But I have a soup of words trapped inside my dough head: Mewing mogging looksmaxxing Matt Rife looks like he won a sheet metal eating competition. Long philtrum low dimorphism dentalfacial development bone mass. Military beauty tradwife culture rise of conservatism. Bigger smaller bigger smaller sharper softer flat. No, I don't care about any of it. I think. I look back at the front facing camera, where the shadows under my eyes look purple and my face appears as though I've swallowed a year's worth of sodium in one night. I tell myself that a good life is one of lost sleep and something nice to eat. Maybe I'll believe that today. Tomorrow remains to be seen. I turn the camera off. ■

Steffi Cao is a culture writer and journalist living in Brooklyn. Her work has been featured in The Atlantic, The Guardian, and Rolling Stone among others. Her favorite berry is a blueberry.

On Beautiful Code

Sheon Han

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HANG AROUND IN TECH long enough and you might notice that some programmers have taken to declaring certain pieces of code beautiful. Once, during a product demo involving some live-coding, I heard someone in the audience declare a slick one-liner "a beauty"; in college, a professor paused mid-lecture to admire the elegance of a particularly clean abstraction; and when a senior engineer at my first job—let's call him Chris, because that's his name—spotted a bottleneck in Scala and surgically replaced the sluggish part with some virtuously written C++, a wide-eyed junior dev blurted out, "Damn, that's beautiful, Chris." (Fine, the last one is me.)

I admit that seeing well-composed lines of code can be gratifying, but is "beauty" the right word? Few philosophical forays have been as inconclusive as the attempt to define beauty. (Philosopher Nelson Goodman wryly observed that theorists attempting to specify aesthetic experience are looking for "aesthetic phlogiston.") For Kant, it was "disinterested pleasure." Santayana called it "objectified pleasure." A certain "formedness" for Plato and Plotinus and the "sensuous appearing of the Idea" for Hegel. Iris Murdoch saw it as "an occasion for 'unselfing'"; Elaine Scarry wrote that it "brings copies of itself into being." Alexander Nehamas believes "your life will be better if that is a part of it," while Crispin Sartwell calls it "the object of longing." For Stendhal, it is simply "a promise of happiness." What gives?

Because little discussion exists around what makes code beautiful, it helps to look at a neighboring field that has a longer history of discourse on the subject: mathematics. Mathematicians, normally a precise bunch, have a way of retreating into that squirrelly word, beauty, when speaking of the discipline's highest virtue. When surveying discussions of mathematical beauty, however, a fair amount of schmaltz and abstraction seems to creep in. Normally paragons of rigor, some mathematicians suddenly become romantics. Bertrand Russell once described, in oddly lascivious language, mathematics as "a beauty cold and austere, like that of sculpture, without appeal to any part of our weaker nature, without the gorgeous trappings of painting

or music, yet sublimely pure." Some become mystics. Arthur Cayley, a 19th-century British mathematician, said, "As for everything else, so for a mathematical theory: beauty can be perceived but not explained."

Purple prose abounds. Euler's identity ($e^{i\pi} + 1 = 0$) is, Stanford mathematician Keith Devlin writes, "a Shakespearean sonnet that captures the very essence of love," which "reaches down into the very depths of existence." Even Paul Erdős, when asked why numbers are beautiful, failed to articulate: "It's like asking why Beethoven's Ninth Symphony is beautiful. If you don't see why, someone can't tell you. I know numbers are beautiful. If they aren't beautiful, nothing is." Unless he's employing a proof technique I don't recognize, this sounds an awful lot like the hackneyed you-know-when-you-see-it obscenity defense.

{}

A more concrete place to start is British mathematician G. H. Hardy's 1940 essay *A Mathematician's Apology*. It's something of a sacred text enshrined in the hearts of aspiring mathematicians—with all that entails—much like *Surely You're Joking, Mr. Feynman!* is for young physicists (or think Patti Smith for the mathematically inclined).

Hardy presents two classic theorems as exemplars of mathematical beauty: Euclid's proof that there are infinitely many prime numbers, and Pythagoras's proof that $\sqrt{2}$ is irrational. Both theorems, Hardy writes, possess "a very high degree of unexpectedness, combined with inevitability and economy." He goes on to enumerate six criteria in total (economy, generality, depth, significance, unexpectedness, and inevitability) though he ultimately acknowledges the inherent ambiguity in what qualifies under them and doesn't provide many concrete examples. Thus a good companion text is MIT mathematician and philosopher Gian-Carlo Rota's *The Phenomenology of Mathematical Beauty*, an equally brilliant, but less well known—though perhaps more rigorous and sober-toned—exploration that both grounds and challenges Hardy's points.

For instance, Rota discusses the theorem that there are only five Platonic solids: tetrahedron, cube, octahedron, dodecahedron,

and icosahedron. As he notes, it's not merely their *generalizability* that makes them remarkable but also their *unexpectedness*. In other words, if you examine every molecule and object in the entire universe—from subatomic particles to entire galaxies, all the way to the very edge of this expanding cosmos—not a single physical structure that violates these mathematical truths will ever appear. That's quite something.

Or take Euler's identity, an almost occultic formula where nature's fundamental constants are arranged so compactly with seeming inevitability—like a neatly folded piece of origami. Some have even called it proof of God. I don't know about that, but despite its tendency to put mathematicians in a melodramatic mood, it may hint at a coherent structure underlying the deep fabric of nature: a certain *depth* and *inevitability*.

Rota goes on to note that all mathematicians agree Picard's theorem, with its astonishingly concise five-line proof, is beautiful—a case of *economy* at its finest. The theorem states that "an entire function of a complex variable takes all values with at most two exceptions." If that sounds abstract, I'll attempt an analogy: imagine a standard dartboard, like the ones you see in dive bars, with different sections corresponding to various scores. Now, picture a world where dartboards are stretched, twisted, and warped into wildly contorted shapes. Picard's theorem guarantees that in this world, no matter where you throw, your darts will still pierce through nearly every possible scoring region, missing at most two.

Yet another form of beauty—call it "*interconnectedness*"—emerges when seemingly unrelated areas of mathematics suddenly link together, much like when a writer blends two distinct styles to create something new—take J.M. Coetzee's *Elizabeth Costello*, which fuses the novel of ideas with the academic lecture, or Nabokov's *Pale Fire*. Andrew Wiles's proof of Fermat's Last Theorem did this with elliptic curves and modular forms. More recently, Fields Medalist June Huh solved longstanding combinatorics problems by connecting them to algebraic geometry.

{}

These mathematical schemas

give us a good place to start unpacking the idea of beauty in programming. Let's begin with economy, as I suspect that when programmers think of beautiful code, the first quality that comes to mind is its conciseness—succinct, tightly written code.

A concept in theoretical computer science that best relates to this notion of economy is "Kolmogorov complexity," which measures the length of the shortest possible program that can reproduce a given string. For example, the string "AAAAAAAAAA" can be described by a simple program like Print 'A' ten times. More generally, a string consisting of N repeated 'A's can be represented as Print 'A' N times, which results in low Kolmogorov complexity (and low randomness). But a random-seeming string like "uXyKcdjmc@jrFdDBh2ruEoddHBx3Te," which has no shorter way to be described than by stating it outright, has high Kolmogorov complexity. As an analogy, think about how the most intricate and original literature is irreducible to a summary; it can only be fully understood by reading it in its entirety.[1]

If two programs achieve the same result, the shorter one is often considered more economical. But I'd say there are two kinds of economy—the deep kind and the cosmetic kind. Cosmetic economy, while not mutually exclusive with the deep kind, is more common in languages like Haskell or Lisp, where syntax allows for concise expressions that would be much more verbose in other languages. For example, a sorting function that spans multiple lines in some languages can be expressed in Haskell as:

```
sort (x:xs) = sort (filter (<= x) xs) ++ [x] ++ sort (filter (
```

But of course, conciseness can slide into obfuscation, like code that pushes minimalism to the point of absurdity. Printing the list of all powers of 2, a simple task, can devolve into cryptic snippets like this:

```
fix$(<$>)<$>(:)<*>((<$>((:[])<$>))(=<<)<$>(*)<$>(
```

This is false economy; hence false beauty.

1. Kolmogorov complexity underlies the mechanisms behind aphorisms—if you're François de La Rochefoucauld, "No one deserves to be praised for kindness if he does not have the strength to be bad"; whereas a lesser writer might produce an overblown novel of excess.

Or take the REPL, a common interactive tool—you can see it in action simply by opening your Terminal application and running a few commands:

```
> echo $USER
sheonhan

> date
Wed Feb 10 09:19:49 PST 2025
```

Python, a language known for its readability, handles this with minimal effort:

```
while True:
    try:
        print(eval(input()))
    except Exception as e:
        print(e)
```

In C, the same functionality becomes more verbose:

```
#include <stdio.h>
#include <stdlib.h>

int main() {
    char input[256];
    while (1) {
        printf("> ");
        fgets(input, sizeof(input), stdin);
        system(input);
    }
    return 0;
}
```

And if you want to write it in—god forbid—Java:

```
import java.util.Scanner;
import javax.script.*;

public class SimpleREPL {
    public static void main(String[]
        Scanner scanner = new Scanner
        ScriptEngine engine = new
ScriptEngineManager().getEngineByName

        while (true) {
            System.out.print("> ");
            String input = scanner.ne
            try {
                System.out.println(er
            } catch (Exception e) {
                System.out.println("E
            }
        }
    }
}
```

```
 args) throws ScriptException {
r(System.in);

e("JavaScript");



extLine();

ngine.eval(input));

Error: " + e.getMessage());
```

Meanwhile, in Lisp:

```
(loop (print (eval (read))))
```

That's it. The usual boilerplate of other languages is stripped away, leaving the logic in its purest form.

That's economy at the file or line level. But line-level economy is often trivial. What's truly compelling—what holds real aesthetic value—is economy at the level of the entire codebase.

Take AWK, a language developed at Bell Labs in the 1970s by Alfred Aho, Peter Weinberger, and Brian Kernighan (hence AWK, from the first letters of their names) and maintained over the years by Kernighan himself, a key member of the original UNIX team and the person behind the "Hello, World" convention.

The language is just a few thousand lines of code (full source code is available on GitHub) but over 48 years, it has evolved, not unlike revising a long prose poem over decades—Walt Whitman continually revised "Song of Myself" across multiple versions, and if anyone in computing has a comparable status to Whitman, it is Kernighan—keeping the overall codebase lean and tightly structured, carefully refactored to follow modern conventions and expanded with new features (e.g., Unicode support). The same could be said of the Linux kernel, a kind of computational tourbillon tended by a guild of dedicated horologists, whom we call Linux maintainers.

{}

Next, generality. Turing Machines, the very embodiment of generality in computing, are inseparable from any discussion about programming languages. What Turing did was formalize a question so intuitive yet elusive—What does it mean to compute something? Computing is something humans have done for millennia, but what does it actually mean to compute 4 + 5 = 9? The Turing Machine, put in a simplified way, provides one way to "define" computation and shows that any computation, no matter how complex, can ultimately be performed by a Turing Machine.

Notably, in *The Phenomenology of Mathematical Beauty*, Rota differentiates between beautiful theorems and beautiful proofs. (Consider

books with a profound thesis written in turgid prose versus those with both intellectual depth and elegance in execution.) Rota also notes that elegant proofs and beautiful proofs aren't the same: elegance is about presentation, while beauty is about truth.

Rota's distinction is relevant here because while the Turing Machine is a beautiful theorem, its proof, stated in the landmark paper *On Computable Numbers, with an Application to the Entscheidungsproblem*, is not exactly an apogee of elegance. Its descriptions of the tape, head movements, and state transitions are somewhat mechanical and verbose.

But Turing wasn't the only one to formulate a theory of computation. Alternative formulations were developed by Turing's advisor, Alonzo Church, with lambda calculus, and by Stephen Kleene with what are called recursive functions. Without going into the details of the proofs, the important point is that what they "independently" tried to formulate was, in fact, equivalent. (This is the Church-Turing thesis.) And among these results, Church's lambda calculus proofs may be the most elegant and concise. Kleene's recursive function proofs, perhaps the most technical of the three, could be considered less elegant than Church's and less intuitive than the Turing Machine's.

{}

Some forms of beauty in programming appear to go beyond the criteria often discussed by mathematicians. One of the more well-known remarks on code aesthetics came at an unlikely venue: the 2016 TED conference, where a perpetually irritated Linus Torvalds (creator of Linux and Git) was being interviewed by Chris Anderson.

Speaking about "good taste" and "bad taste" in code, Torvalds presented two code snippets that performed the same task—removing an item from a data structure called a linked list. Both were functionally identical, but one was structured in a way that eliminated entire classes of potential bugs—without unnecessary complexity.

This kind of beauty, I think, resembles the elegance of good industrial design. Good code, like well-engineered machinery, eliminates

certain types of failures by design. Think of a dead man's switch on a lawn mower, which stops it from turning into a runaway buzzsaw on wheels if the operator releases their grip. Similarly, well-structured software prevents entire categories of errors simply through the way it is written. Call it clarity or even safety.

{}

If there is a quality truly unique to programming, I'd say that it's hackiness: not "hack" in the sense of malicious exploits, but in the sense of ingenious, gratifying solutions.

A famous example—famous enough to have its own Wikipedia entry and be familiar to a non-gamer like me—is the fast inverse square root algorithm, a rogue code snippet buried in the *Quake III* engine. Calculating an inverse square root (e.g., for x = 9, the inverse square root, 1/ x, is 1/3) isn't usually the most intricate mathematical operation, but finding a way to compute it repeatedly and efficiently is a different matter. In the 1990s, real-time 3D graphics relied heavily on computing inverse square roots for lighting and shading calculations. Traditional methods—based on division and floating-point operations—were too slow for the demands of fast-paced rendering, thus high-speed gameplay.

Then came this code—one that an entire generation of '90s gamers was unknowingly indebted to—which cleverly traded a bit of accuracy for a significant boost in speed. Here's the code, with its original comments intact:

```
float Q_rsqrt( float number )
{
    long i;
    float x2, y;
    const float threehalfs = 1.5F;

    x2 = number * 0.5F;
    y  = number;
    i  = * ( long * ) &y;                       // evil floating point
    i  = 0x5f3759df - ( i >> 1 );               // what the fuck?
    y  = * ( float * ) &i;
    y  = y * ( threehalfs - ( x2 * y * y ) );   // 1st iteration
//  y  = y * ( threehalfs - ( x2 * y * y ) );   // 2nd iteration, thi

    return y;
}
```

"0x5f3759df" is where the magic happens — this algorithm treats the bits of a floating-point number like an integer, shifts them around, and subtracts that mysterious constant, which yields a good enough approximation while avoiding the expensive math.

{}

Yet none of this answers whether beautiful code—by dint of aesthetics—is necessarily good code, or whether beauty is a quality programmers should prioritize over other considerations. A few years ago, I started to think that every action or endeavor involves a mix of—and tradeoffs between—three values: beauty, utility, and morality. Something can be highly beautiful but low in utility and more or less morally neutral (painting landscapes). Another may be beautiful and highly useful but morally troubling (designing sleek fighter jets). Yet another may offer no beauty but be supremely useful and moral (inventing a water filtration system). What I value most—and how I rank these qualities—changes over time. The only invariant is that utility is never first and morality is never last.

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ls can be removed

Different domains give weight to different values. It's a mistake to demand utility from poetry. And investigative journalism, even when not a single sentence shines, may still push toward a more just world. Speaking for myself, when there's a tradeoff—and there always is—I don't think programmers should be too insistent on beauty. After all, having laid out what can be thought of as programmatic beauty, I wonder if "beauty" is too generous a word. Even the most elegant codebase does not give me the same soul-piercing jolt as reading, say, Nabokov or Rachel Cusk. In other words, good code can only be so beautiful.

The romanticization of beauty is often presented as a virtue when, in truth, it can be a telling sign—whether knowingly or unknowingly—of the neglect of other virtues. Hardy valued pure mathematics for its supposed "uselessness"—the idea that, detached from real-world applications, it could not be harmful. His disdain for applied mathematics was partly shaped by witnessing World War I, where mathematics was harnessed for practical ends that were often destructive. "I have never done anything 'useful.' No discovery of mine has made, or is likely to make, directly or indirectly, for good or ill, the least difference to the amenity of the world," wrote Hardy.

Hardy's stance, however, is

problematic on two counts. First, the examples he upheld as "pure"—number theory and the theory of relativity—because they appeared to have no "warlike purpose" were, of course, later put to just such uses. Number theory became the foundation of modern cryptography, as seen in the breaking of the Enigma code. Meanwhile, relativity formed a key link in the chain that led to the atomic bomb.

Second, Hardy's perspective smacks of a kind of class-blind snobbery—a belief that utility is somehow impure, that labor done to scrape by is beneath him—akin to a comment one might hear from a second-generation art gallerist who understands little beyond his inherited wall. Scientists or mathematicians who believe merely avoiding direct involvement in harmful applications is enough are like those who take comfort in not being Wernher von Braun—the Nazi rocket engineer—as if that alone were an accomplishment. The dismissal of usefulness and the patrician attitude toward "purity" are more about inflating one's ego than making any meaningful statement about scholarly integrity; beauty becomes a decoy for evading moral responsibility.

What Hardy's aristocratic obliviousness fails to acknowledge is that the pursuit of beauty—when divorced from moral considerations—is not as neutral as it seems. An amoral stance doesn't remain neutral without a sustained ethical counterbalance, because the ground an ethical individual stands on is always slanted; before long, one inevitably finds oneself slipping down the slope of moral decay.

To put it more cynically, some mathematicians, like Hardy, want it both ways—not just as a technically rigorous discipline that showcases raw intelligence, but also as an elevated and aesthetically profound enterprise. One not only needs to be seen as a genius but as an artist—better yet, an aesthete. Yet it's revealing that Hardy frequently condescended to other disciplines, claiming that ideas in paintings are usually "commonplace and unimportant" and that, in poetry, the importance of ideas is "habitually exaggerated." Lacking the eye for other kinds of beauty, Hardy—if he was ever an aesthete at all—proves to be a parochial one, not a universal

kind.

That programs are not a primary site of aesthetic experience is not a slight against programming but rather an acknowledgment that programmers do not need to justify their work by its beauty. Instead, they should lean into what programming does best: utility, for once, as a guiding principle. Utility is a value often viewed with contempt—for understandable reasons, given the industry's long-standing impulse for utility maximization—and with suspicion, rightly so, since utility itself knows no morality. But when we practice programming so that beauty serves utility, and utility, in turn, serves morality, then useful programs may not always embody beauty, but if they are ever so good, they can uphold another and much needed virtue: morality.

Sheon Han is a writer and programmer based in Palo Alto, California. His work has appeared in The New Yorker, WIRED, The Atlantic, The Point and elsewhere. You can find more of his work at sheonhan.net

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TIME-DEEP MULTIPLES

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ȝyt y courbede on my knes · and cryede here of grace ·
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ȝit I courbede on my knees · & criede hir of grace
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YEt I courbed on my knees . and cried hire of grace
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theran wt the eye of my vnderstanding
and thought, what may this be. And
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TIME-DEEP MULTIPLES

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/Corylus_maxima
/Cultivar
/Ornamental_plant
/Garden
/Harry_Lauder
/Wattle_(construction)
/Withy
/Coracle
/Coppicing
/Hurdle
/Larva
/Lepidoptera
/Eriocrania_chrysolepidella

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|calized habitats existing|
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|ms down there 1/29 10 am,|
|eeear warm headphones, <3|
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TIME-DEEP MULTIPLES

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TIME-DEEP MULTIPLES

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ÞE kyng & hise kny3tes ·ʳ to þe kirke wenten
The kyng and his kny3tes ·ʳ to þe kerke wente .
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The Art of Forgetting

Patrick Danahy

As every field rushes to grapple with AI's implications, we've witnessed flashes of its potential—some deeply disturbing, others promising, even joyful. Technologies like ChatGPT, DALL-E, Midjourney, and Boston Dynamics' robotics have created a landscape where the future feels simultaneously closer and more alien than ever. The conversation surrounding AI is far from settled. Questions abound: Is it a restrictive apparatus, limiting human offerings or engagement with the world? A prescriptive or deterministic mechanism, ever narrowing or funneling toward one end, closing the world of possibilities around us? A doom bringer or brain destroyer—the ultimate tool for the lazy and uninspired?

I come to this discourse as a designer and teacher trained in architecture, a role that is both subjective and objective, quantifiable and qualitative. I often play mathematician, technician, and creative spirit who cares equally for beauty as for logic and reason. It's from this dissonant viewpoint that I have felt the whiz of AI brush past me, sometimes exhilarating, sometimes disorienting. Yet within this rush, and through my own engagement with these algorithms, I have begun to find clarity about some of these anxieties and hopes within my own work. It's from this perspective— not as a prophet or a pessimist, but as a participant who sees AI as a prosthetic—that I want to offer a reflection on AI's potential.

Contrary to the narratives that are often put forth by techno-optimists, I believe that AI's greatest promise doesn't lie in speeding up labor or mimicking human creativity but in helping us unlearn, forget, and speculate more boldly. Rather than viewing AI merely as a replacement or accelerator, I see it as a tool for recovering sympathy, contradiction, nonconscious thinking, and relational aesthetics—those parts of human experience that industrial and informational cultures have historically suppressed.

The question is not whether AI will "take over," but whether we will allow it to help us access older, slower, more ambiguous, and more fertile ways of engaging with ourselves, each other, and the world. This project demands care, criticality, and imagination—and it demands that we resist the narrowing tendencies of both market logic and technological determinism that dominate so much of discourse today.

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While debates rage over the ultimate value of AI-generated artworks, one recurring theme emerges across many critical conversations: the process of making still matters. I can imagine the backbreaking work of a sculptor, the toiling hours of a painter, the violent gestures of an abstract expressionist at their canvas. I can feel these things, even without ever having touched that marble or brush myself. As a lover of art, I'm moved by Auguste Rodin's sculptural works, but even more so by his plaster molds, his cast tests riddled with seams and imperfections. They reveal the hidden labor, the mistakes, the struggle underneath the marble's polished surface. They show not just the finished idea but the process of grappling itself.

This is the sympathetic bond of art: a non-verbal, almost somatic connection that ties us, empathically, to others' experiences. Nelson Goodman reminds us, in *Ways of Worldmaking*, that our very perceptions are shaped by history, need, and prejudice: "Not only how but what it sees is regulated by

need and prejudice… Nothing is seen nakedly or naked." We do not passively receive artworks; we seek something in them. Sympathy, struggle, human presence are all actively projected into our seeing.

When AI produces an artwork—particularly when it does so without any labor we can imagine or access—this sympathetic bond risks being severed. The feeling of connection, the intuition that someone else's experience pulses beneath the surface, can be lost. Imagine the dissonance of believing you are engaging with another human's struggle or triumph, only to learn it was the output of a convoluted algorithm, hyper-indexical and cold. For many viewing these artworks, this discovery feels like a betrayal.

For artists, the risk is amplified. The initial instinct by industry has been to treat AI as a tool for technical acceleration. Within the dominant economic system, speed is treated as a virtue—often the primary one—because it maximizes output, visibility, and profit. It is an ideology that thinks that the function of the artist, the writer, the craftsperson is simply to move faster: to output more, to meet the pace of machine-assisted production. Yet it isn't just the fear that AI will render the artist's labor invisible or economically unsustainable that we can sense. There is the added concern that when the relationship between time investment and value is severed, the sympathetic bond begins to erode. The act of making is flattened into mere output. While the material threats that AI pose are real, as an architect, I'm equally drawn to the question of what AI might mean for the spirit of creation.

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I must begin by confessing that instead of feeling betrayed by generated imagery, I've often found myself captivated. Even when the result feels kitschy or derivative. I'm drawn to the alien expressiveness at work in AI imagery, how it functions as a signal from another mode of thought. The image refracts our own ways of seeing—sometimes distorting them, sometimes clarifying them, but always asking us to look again. In my own work, the power of AI lies not in its ability to replicate known forms, but in its capacity to generate confusion—strange new hybrids that evade simple referentiality. There is a pervasive belief that because AI is trained on referential material—human language, images, and data—its outputs must necessarily be referential as well. In truth, artistic processes integrating AI can gestate material that destabilizes reference as easily as they can reinforce it.

To understand this, it is helpful to turn to Daniel Heller-Roazen's meditations on language itself. In *Echolalias*, he writes that "nowhere is a language more 'itself' than at the moment it seems to leave the terrain of its sound and sense." Language becomes most alive, most itself, precisely at the moment it teeters on the brink of nonsense. A similar sentiment is echoed in Katherine Hayles's exploration of cognition beyond conscious thought through Peter Watts's novel *Blindsight*.[1] In the story, the protagonist Siri Keeton undergoes a radical hemispherectomy and subsequently loses the natural ability to intuit meaning. To compensate, he retrains himself by studying micro expressions and "information topologies," learning to infer meaning through patterns rather than instinct. Confronted with the strangeness of this mechanical empathy, Keeton reflects, "people simply can't accept that patterns carry their own intelligence." Hayles uses this moment to highlight a crucial idea: intelligence is not confined to conscious deliberation but also emerges from ambient, patterned, and latent interconnections. This domain of nonconscious cognition operates not

through explicit, referential understanding, but through associative, relational processes that unfold beneath the surface.

This insight is crucial for rethinking the role of AI in artistic practice. Rather than treating AI as a representational engine—one that simply reflects or amplifies known realities—we might understand it as an agent of nonconscious patterning. In this view, AI becomes a prosthesis for intuition, a mechanism through which submerged cognitive processes—those ambient, patterned, and associative logics—can be exteriorized and interacted with. It stirs up dormant connections, speculative leaps, and configurations that our habitual categories might otherwise foreclose. This doesn't mean AI offers access to some universal unconscious, à la Jung, but that it models an alternate, distributed mode of cognition—one that operates not through self-awareness but through correlation, recurrence, and relational inference. In this light, the most creative outputs of AI are not failures of reference but demonstrations of a deeper linguistic truth: meaning arises most vibrantly when it is unstable, slipping just beyond fixed denotation.

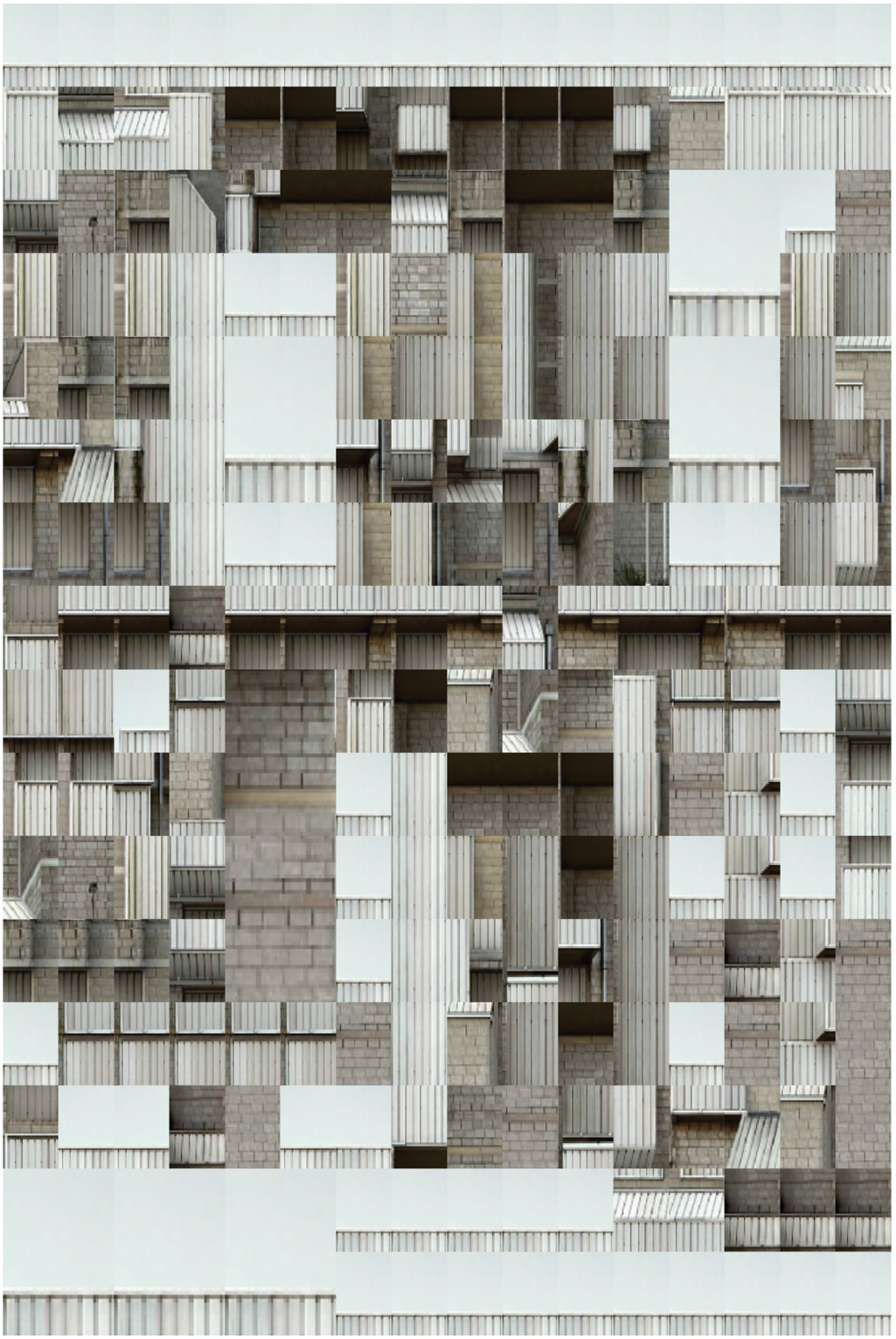
"TRUE INVENTION REQUIRES NOT MECHANICAL RECOMBINATION OF THOSE MATERIALS, BUT A SELECTIVE FORGETTING."

To make these thoughts evident, I have developed an image series exploring the detachment and defamiliarization made possible through AI models. In my image series *This, But That* and *This, Like That*, images are constructed through a perception-based tiling system—a quadtree subdivision method that uses mean squared error and standard deviation of pixel values within each tile to determine whether further subdivision is warranted. This process discretizes image structure and draws on techniques common in image compression, pairing visual detail with computational efficiency. The result is a mosaic-like image built from nested units of varying size and granularity. Each tile becomes a modular fragment whose aesthetic and semantic significance fluctuates depending on its context.

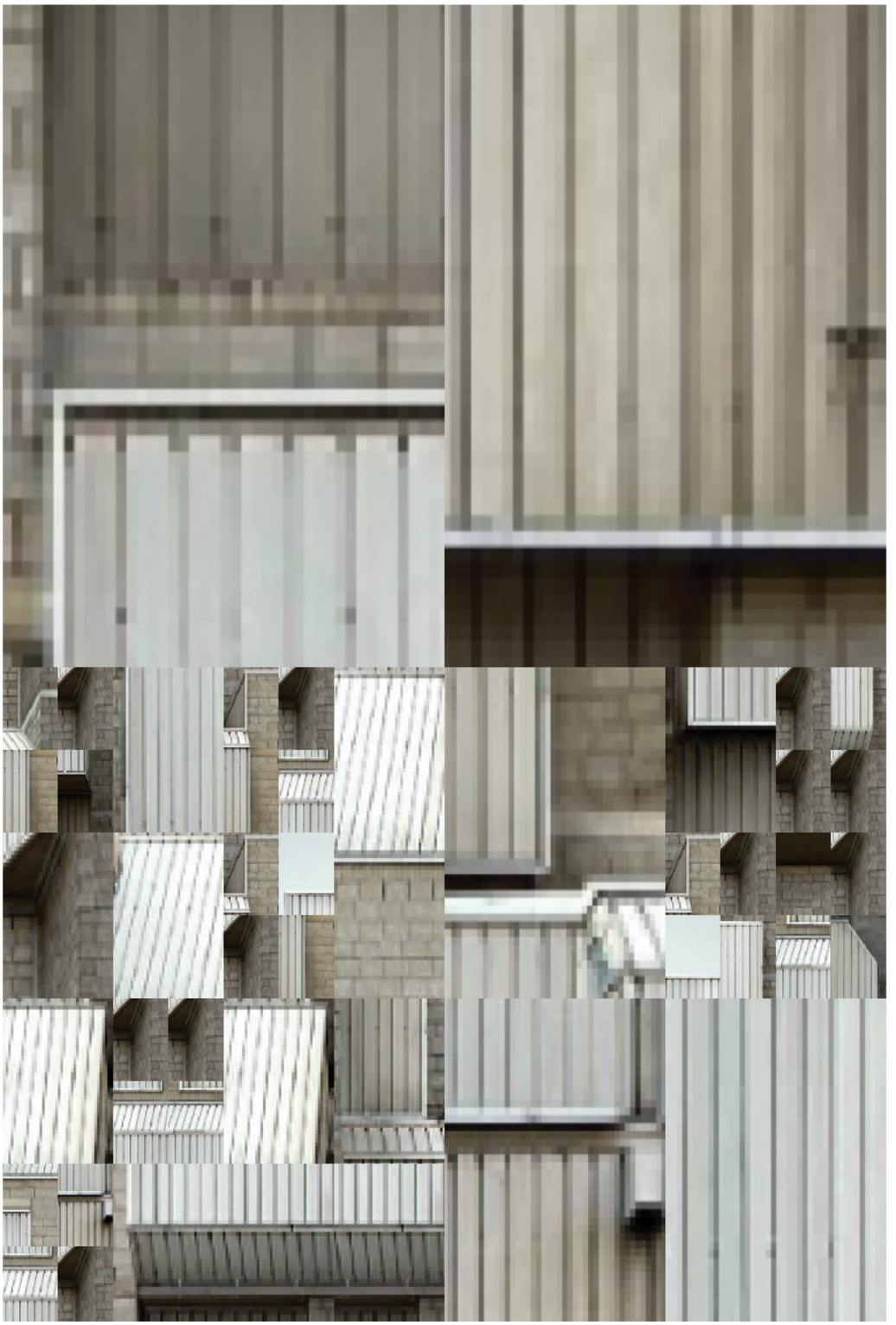
These compressed mosaics are not just formal exercises. They resemble Thomas Ruff's over-compressed photographs in that they stage a degradation of reference: images made strange through data loss and algorithmic intervention. What remains is not a clear depiction of an original scene but a vague residue of form and color—an impressionistic shell shaped by technical thresholds. The image becomes not a representation, but a field of transformation.

The quadtree, then, functions as a patchwork generator: a system for organizing fragments into a relational ecology. Each tile holds different visual and semantic weight, contributing to an emergent syntactic network. Discretization becomes the first gesture of defamiliarization—it fractures legibility, defers recognition, and opens space for ambiguity. The familiar becomes strange, not through abstraction alone but through recomposition. Meaning is not given; it is distributed, unstable, and contingent.

This fragmentation allows for what I call "ecologies of parts" or "metaphorical assemblies." In *This, But That*, selective deletion removes portions of the image, asking the remaining tiles to carry the perceptual and aesthetic burden of the whole. This disrupts the holistic reading of the image and foregrounds the relational mesh that binds its parts. In *This, Like That*, fragments from one image are used to construct another, reterritorializing material from one semantic context into an entirely different visual grammar. Tiles that once carried concrete referents



Danahy, 2022. This, Like That: Image Mosaics using a Perceptual Similarity Model and Recursive Image Subdivisions.



Danahy, 2022. This, But That. Image Mosaics using a Perceptual Similarity Model and Recursive Image Subdivisions.

are cast into new arrangements, stripped of their original context and forced to signify otherwise—or not at all. The result is a kind of "visual daisy-chaining," where the semantics of the original image dissolve into a new syntactic structure defined by pattern, tension, and ambiguity.

This practice finds a kind of kinship in the behavior of certain AI systems—variational autoencoders, single-shot learners, object detection models—which can function not only as tools of recognition but as engines of defamiliarization. These models allow artists to access a space of semantic forgetting, a perceptual zone in which the referent slips away and is replaced by strange, emergent orderings. This is not an error but a productive rupture: an aesthetic logic built from parts, fragments, and disassemblies. Meaning here is constructed relationally, not representationally.

In this sense, AI is not simply a machine for generating images but a prosthetic for rethinking composition itself. It invites a shift from representational fidelity to speculative assembly, from semantic clarity to syntactic play. Like the assemblages of Manuel DeLanda, these works operate through territorialization and emergence—where parts do not illustrate wholes but participate in their construction. Figures arise not through resemblance but through relational binding. They are legible not because they mirror the real, but because they activate our capacity for perceptual and conceptual inference.

AI, therefore, can be more than a mirror reflecting back the world as we know it. It can be a prism, refracting the known into the unknown, pushing us into territories where referents collapse and fiction takes root. It allows us to encounter not just what is, but what might be or never was. And crucially, this process of fictionalization—of moving beyond the familiar—is not an accident or error. It is where the true promise of AI in artistic processes lies: not in the efficiency of reproducing what already exists, but in the speculative rupture that makes room for the not-yet-imagined.

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In the tale of Abu Nuwas, after memorizing a thousand lines of ancient verse, the famed poet is told by his master to forget them entirely before composing his own poetry. Only after some time when he proclaims that he has forgotten them completely does the master reply, "Now go compose!" Only through this act of obliteration—of severing reference, of unbinding himself from the strictures of memorized knowledge—can he truly create.

Like Abu Nuwas, artists are steeped in immense corpuses of reference material: images, texts, sounds. But true invention requires not mechanical recombination of those materials, but a selective forgetting—a capacity to move beyond inherited forms and generate new structures out of relational ambiguity. In this sense, AI can serve as a tool of creative forgetting—but it rarely does so by default. AI more often reproduces dominant aesthetic, linguistic, and cultural patterns, reinforcing the very referential systems it has been trained upon. AI is not a neutral field; because it is trained on human materials using human-made algorithms, it inherits and reproduces the dominant structures of its source data. What might be mistaken for the emergence of a "collective unconscious" is often just the echo of what has been most frequently encoded: white, Western, heteronormative, patriarchal norms disguised as statistical averages.

The task, then, is to approach AI not as a passive engine of production, but as a speculative instrument—one that, when critically and creatively engaged, allows us to press against the

grain of recognition. Donna Haraway's call to "stay with the trouble" becomes relevant here.[2] It's essential that we don't embrace the output of AI uncritically, but rather work within and against them—to trouble their inheritance, to use them for speculative estrangement rather than passive reflection. Speculative, non-representational uses of AI—those that acknowledge their fictional, metaphorical nature—honor its promise of ambiguity and nonconscious interconnection. When used with intention, AI can help externalize and accelerate our efforts to move beyond referential constraints, inviting us into the latent spaces between fixed categories. It opens the possibility—though not the guarantee—of rediscovering what Heller-Roazen calls the "true homeland" of speech: exile, displacement, the generative instability where creativity thrives.[3]

Though there has been plenty of ink spilled regarding all we stand to forget due to our increased reliance on AI, writers like Heller-Roazen remind us that forgetting has a positive dimension as well. Precisely because pattern-based generation unsettles our reliance on conscious reference, it can also open ethical and imaginative pathways. In *Vibrant Matter*, Jane Bennett argues for a heightened sensitivity to the vibrancy and agency of objects and processes, urging us to appreciate the subtle, emergent qualities that escape categorical capture. Applied to AI, Bennett's ethic of attention demands that we value the strange, the contradictory, the flickering moments where AI-generated work refuses stable meaning and invites wonder instead. To pay attention to these qualitative moments in the output of AI processes is to resist the drive toward instrumentalization and misrepresentation. It is to honor AI's capacity for sympathetic discovery—not by pretending it thinks or feels as we do, but by recognizing the new terrains of association, forgetting, and reimagining it can catalyze.

Ultimately, the most profound role of AI may not be as a producer of finished artifacts or efficient outputs, but as a companion in the ongoing human project of discovering the hidden sympathies of the world. It invites us into new relational fields, where memory and forgetting, reason and nonconscious patterning, reality and imagination intersect in ever-shifting ways. There's little doubt that AI will lead us to forget. But fear of technologically-induced forgetting goes back as far as Plato, who distrusted writing for those same reasons. What matters is that we choose to forget in ways that do not diminish ourselves, but rather extend the reach of our sympathies—toward one another, toward the unknown, and toward the fragile, fertile spaces between.

1. Hayles, N. Katherine. *Unthought: The Power of the Cognitive Nonconscious*. University of Chicago Press, 2017.

2. Haraway, Donna J. *Staying with the Trouble*. Duke University Press, 2016.

3. Heller-Roazen, Daniel. *Echolalias: On the Forgetting of Language*. New York: Zone Books, 2005.

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"I wonder what new stories we
can tell to lead us out of this
dysphoria

if new strands of reverie
have already begun."

Digital Architectures

Rachel TonThat

THE PROCESS OF CREATION has always felt like an exploration: non-linear and filled with doubt. One presses forward cautiously with one hand outstretched, like Lucy in the darkness of the wardrobe, snow creaking underfoot—the way alternating between uncertainty and ease.

There are moments in painting when every muscle seems strained towards the delicate point of the brush, when the movement of the arm begins at the shoulder and continues downwards, from bicep to forearm, into the wrist, from those slender sinews into the fingertips and through the brush in fine strokes—the physical manifestation of thought and feeling, energy moving from the figure to the page. To the well-practiced athlete is given the same untroubled instinct as an accomplished artist, the body moves intuitively before the mind can weigh it down.

But for each of these moments of fluidity comes others, when in carelessness one goes too far, ruining a work irreversibly, or in less extreme instances, simply creating moments that only the artist knows about, sticky points invisible to outsiders which fill its creator with regret. For many works, I can remember those moments keenly. A few years ago, working in my Zurich studio late in the night on a letter to be mailed in the morning before I flew back to the US, I became convinced that the soft layers of gouache in blue and flaxen hues should be offset by a black background. The effect was ruined. Around 2am I put it into a drawer in which many other works have been laid to rest and started again.

For years now and for many reasons, I've been thinking about the birth of the internet and the development of virtual space. Born in 1989—the same year the World Wide Web was created—my early internet experiences often felt like an echo of my own development, as if the two of us were growing apace. There must have been a correlation between the simple, colorful graphics on the first Power Macintosh my father brought home in 1995 and my predilections as a kindergartener living in primary colors. Even the evolution from the simple operating systems and online searches of middle and high school to the vast expanse of information I now trawl

through, uncertain of what is real or true, sometimes feels like the shift of my own understanding of the world and its multiplicities. But there was also the legend of its birth, which I pieced together over the years—the invention of the virtual realm as an exercise in storytelling, a psychological space shaped through words and ideas.

Beyond its physical-virtual interface, the Web exists in our imaginations, a space fabricated from its existing systems and our spatial understanding as bodied beings, for in spite of its manifold functions, only human imagination could have rendered this network of code into a place. The black rectangle disclosing replies becomes a room in which we stand in the dark with another person, speaking mind to mind. A web page or social media account manifests as a storefront window displaying a selection of wares. Yet, though they are now linked, the creation of this virtual space preceded the birth of the internet or the World Wide Web.

In his seminal work of philosophy, *The Production of Space*, Henri Lefebve writes, with great feeling, "Epistemologico-philosophical thinking has failed to furnish the basis for a science which has been struggling to emerge for a very long time, as witness an immense accumulation of research and publication. That science is—or would be—a science of space." Lefebvre argued that there was at present no system to analyze the numerous connections between the planned use of a physical space, its actual embodiment through social behavior, and the way it is felt and remembered over time.

The Production of Space is one of the most influential books on my practice as an installation artist, opening the door to the psychology and ethnography of space. In earlier readings I felt he was overly exacting in trying to create systems to pin down something so multifaceted and indefinite. Now, I dwell more on his many unanswered questions than his proposed systems. The book shares some kinship with Italo Calvino's novel, *Invisible Cities*. As Marco Polo recounts the numberless faces of Venice, so too does Lefebvre meditate on space as it changes through time, capitalism, and technocracy, prospecting shades of its meaning like a man peering through the myriad planes of an endless crystal.

Lefebvre places the dreams of space in art and literature under his category of lived space. Against the conventions of conceived space—what was planned and intended by architects and governments—and perceived space—the resulting sphere shaped through social use—lived space stands as a place of possibility and perhaps resistance against what is, opposed to what could be. But Lefebvre's system reaches its limits in the dissemination of virtual space. What

I believe lies at the heart of the creation of virtual space is the process of dreaming, and even more significantly, of collective dreaming. It is that speculation which fascinates me, the reaching forward into the gloom without knowledge of what lies ahead. Perhaps this collective dreaming is akin to the Situationist practice of the *dérive*, the act of wandering or drifting through the city without aim, often done in groups. In this unconscious collective *passage*, sensitive to every shift in psychogeography, it seems impossible to identify exactly who is leading who or if all bodies simply moved, involuntarily, as one.

Virtual space emerged from science fiction as early as the 1930's from the minds of not one, but two different writers, Laurence Manning and Stanley G. Weinbaum, before any real supporting technology existed. Manning's 1933 novel, *The Man Who Awoke* introduced a future in which people could choose to live in a dream of their choosing simulated by machines. "As to the practical matters, such as pleasures and necessities, the dream machines give one a better life than nature or chance could offer," concludes Eric, a young scientist who tends to the machines. Stimulated by electricity, the body lives until the age of its natural death, but slowly withers to resemble an Egyptian mummy. Two years later, Stanley G. Weinbaum published the short story "Pygmalion's Spectacles," in which a man on a business trip meets a professor who offers him a living movie, a dream made real through a goggled mask which uses electrolysis to activate the liquid in the lenses. These early portrayals seemed most inspired by dreams, but perhaps the concept of virtual space was an inevitability for a human civilization so influenced by religion. It was no great leap from imagining alternate worlds created by gods to alternate worlds created by humans wielding machines or the machines themselves.

For me, one of the most defining portrayals of virtual space is crystallized in William Gibson's novel, *Neuromancer*, which appeared as network technology was just beginning to take shape. Published in 1984, only a year after the internet was first officially created through TCP/IP packet switching protocols, *Neuromancer* dreamt of a three-dimensional pictorial rendering of data, a landscape of grids, towers, and symbols which Gibson christened "cyberspace." It was an image that entered our collective consciousness much like his own description of it, "a consensual hallucination experienced daily by billions of legitimate operators, in every nation." At a time when the first computers were only transferring text—the first emailed image would not be sent until 1992—Gibson's fully formed cyberspace, in which one could "jack into" a semblance of their own body, was in part influ-

enced by the aesthetic of *Tron*, a Disney film which came out in 1982 as *Neuromancer* was in its first drafts. In *Tron*, a software engineer is digitized and uploaded into the world of a gaming platform where he interacts with living, reasoning programs. The visuals, stemming from the limited computer graphics of that time, imagined a virtual world of light lines and grids against the darkness.

That these worlds emerged from darkness, echoing the Latin phrase, *ex nihilo*, or the creation of something "out of nothing" is suggested in many depictions of virtual space, including The Street of Neal Stephenson's novel, *Snowcrash*. The Street is a grid of virtual buildings in the semblance of a physical boulevard blazing with light, beyond which was the black void of the unprogrammed, an infinite stretch of stygian nothingness. Over the years, developers extend it, creating shining new side streets and lots that defy that darkness not unlike the shimmering ribbons of green code that delineate *The Matrix* against the black of the screen.

In many ways, *The Matrix*, a cult film which presented a hyper-realistic virtual world created by machines to imprison and enslave the human race, brought the conception of virtual realms full circle. From its earliest formation, virtual space has been portrayed with cynicism, mostly as a machine produced escape from reality or a new public space with dangerous repercussions, and for good reason. Military funding during the Cold War created the internet precursor ARPANET, casting doubts around the future of the internet. Following this uncertainty, most of the narrative examples of virtual space from the 80s onward fall under the genre of cyberpunk, a critique of capitalism and urban decay characterized by a gritty, dystopian future in cities often run by huge, corrupt corporations. *The Matrix* is no exception, fully articulating a future in which the misuse of technology leads to the subjugation of the human race and the near destruction of the planet.

Yet on closer examination, the virtual space of *The Matrix* is revealed to be more than a tool of oppression, functioning simultaneously as a prison, a paracosm designed for escape from the hardships of post-apocalyptic earth, and a public space in which free humans and programs find ways to navigate around the strictures of the system. This nuanced portrayal lends itself to new reflections on how even authoritarian spaces can be understood and subverted. China's Great Firewall, one of the most autocratic and heavily surveilled sectors of today's internet, continues to inadvertently generate a handful of powerful and affordable Chinese VPNs and a constantly evolving vocabulary allowing Chinese citizens to speak about political topics online without triggering further scrutiny.

Lefebvre even writes about the "mutual antagonism" of dominated and appropriated space but notes that despite the strength and victories of dominated space, appropriated space cannot disappear, but "continues to proclaim its importance and demand its restitution."

The perpetuity of subversion feels particularly significant given the misappropriation of these stories. One of the two main theories of science fiction argues that the genre only developed following the Scientific Revolution as a measured response to technological advancement and speculations on how humanity might harm itself using it. Though I have dwelled on the process of creation as a transdisciplinary form of intertextuality—stories influencing each other across time and medium while shaping real technologies—a bizarre feedback loop has emerged. In 2021, Mark Zuckerberg announced that his corporation was attempting to create the metaverse, a term first coined in *Snowcrash* which portrays a hypercapitalist system of wealthy gated communities and storage unit slums in which companies hold more power than the weakened government. Similarly, Google's co-founder Sergey Brin has listed the book as one of the novels that has influenced him the most, notable as Google is facing multiple antitrust lawsuits. There are many more examples of Silicon Valley leaders citing science fiction, extracting ideas without, it would seem, registering the warnings.

There is a passage from the *Upanishads*, often quoted by David Lynch in which a king tells the analogy of a spider. "We are like the spider," said the king. "We weave our life, and then move along in it. We are like the dreamer who dreams and then lives in the dream." Perhaps it would be more accurate to say that we are the creatures that live within a kaleidoscope of shared dreams which sometimes fall into chaos. That moment of pause needed in any exploration or creation becomes harder when it is not a single brush or hand to stay, but competing, disparate desires for a shared, existing world. These days, reading new science fiction and current news that feel interchangeable, I wonder what new stories we can tell to lead us out of this dysphoria, if new strands of reverie have already begun. This murmuring specter of virtual worlds was only one among many possible outcomes. Art, in all of its forms, waits for the dreamers, for there are many more worlds to come out of darkness.

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The Dictionary of Decay

Emma B. Heath

LOL (/lal/) vb. 1. Some decay opens the original structure up, lets us see what it was really made of. ■

2. *LOL* I say out loud to my class in response to Harry, who admits that he did not do the homework because he was too busy "making gains." El Oh El. I spell it out. But even if I had said lolll, lawl, as in drawl but with an L, I would have already been—by virtue of speaking and not guffawing—rejecting the claim of the phrase itself. Laugh out loud, LOL, can't be said and done at the same time. A more guttural *haAHHAJSJWHAHAH* normally expresses the animal reaction.

And so what purpose does LOL serve?

To Harry, the el oh el positions me as an ironic overlord, both distancing me from him by virtue of our roles in school, and also reminding him of our odd proximity; like him, I have friends to text, the internet to peruse. I am not some blind matron. If he breaks his role as dutiful student, I can, in turn, break mine as respectful teacher.

Further: by suggesting that I am laughing out loud, but actually looking at him steadily with a serious expression, I seem to mean something else. Part of the power of the LOL is its ability to signify something amiss without naming it directly: *Some part of what you have said is comical*, I want to communicate, *but more than comical, not funny, per se, it's absurd.* The ambiguity allows him space to figure out this tension on his own. It allows me to act as a mirror, reflecting the absurdity of his excuse back to him.

Because part of the rule of being a teacher, like a parent, is to accept the reality that you will not be wholly seen in the way that you promise to wholly see and understand a student. It is not your right to hurt the child, even if the child hurts you. So I create a barrier by which I shield myself from the pain of being insulted (he didn't do my homework—does he dislike the book? the class? me?). And thus the mirror turns back towards me: The need to resort to irony, to cut through someone without naming the pain they might have caused; I do it to save face. Maintain my cool. Dismiss and distance. Lol, with a lisp, childlike: Wall, which is what it is. ■

3. When an acronym is assimilated into the vernacular as a full word, the process is called lexicalization. SONAR, RADAR, SCUBA, are examples of this. Texting and Twitter have lexicalized many others: LOL, WTF, TBD, LMAO, LMFAO, etc. I'm interested in LOL because unlike SONAR, it still has a nominal attachment to the letters it stands for. We still know its origins, and in a way LOL is the perfect deconstruction of the laughter for which it purportedly stands.

LOL hardly ever refers to laughter itself. It is, in a sense, the ruins of laughter, the patient displayed on the table open for examination. Lol is a lull, a wave, a roll. It is hardly a *ha* or a *guffaw* or a *pfffhh* or a *huhuh*. It is mellifluous, ebbing, and gentle. So unlike laughter is it that it makes one wonder if it really signifies jolliness or merriment or humor at all. But does laughter itself serve to express those things?

Sociologists have split laughter into two categories: the first, Duchenne, is the kind that is "spontaneous, emotional, impulsive and involuntary laughter is a genuine expression of amusement and joy." This is what LOL explicitly refers to: Laugh out loud. But by virtue of having chosen to write the phrase down, the LOL can't be reflexive, spontaneous, or involuntary. By its nature, LOL is voluntary. This paradox strips laughter to its next layer: Non-Duchenne laughter, which is a "studied and not very emotional imitation of spontaneous laughter." It is laughter as "social strategy," the purpose of which is to reward the behavior of others, ease tensions and reinforce norms. This is why babies laugh more when they see other people doing it, and why we rarely laugh alone. If you say something out of turn, a laugh is a way to assimilate it into the normative culture. It signals safety and power. As with an accent, members of social classes laugh in similar ways to signal their membership to a tribe. This is the underbelly of LOL—the "strategic, calculated, and even derisory and aggressive."

Oscar Wilde knew this doubleness of laughter, always displaying its contradictions. "Laughter is not at all a bad beginning for a friendship, and it is far the best ending for one," Lord Henry says, verifying the cruelty latent in that action. Later in *Dorian Gray*, "horrible laughter" emerges from bars and women have "hoarse voices and harsh laughter." Laughter as derisive and cruel, or else as a disguise for something worse: vulnerability. "There was pity in her eyes that became laughter on her lips," he writes. Wilde, known for his humor, held laughter up for the light to reflect its nastier facets—the

hoarse, harsh, and pitiful.

LOL deconstructs, or makes apparent to us all, what laughter has meant all along. Sometimes we laugh because something is funny, but more often than not, it expresses our relation to our social context, or—in the case of Harry, or Lord Henry—reifies a hierarchy. It makes clear that we are connected, in positions of relative power, at all times currying favor or asserting dominance, protecting our egos, or welcoming someone in. That's what's dangerous about its lulling tone --- lol, lol, lol, lol… it hides its secret threat, its violence. ■

4. Some recently received texts:

> *I got that American flag bear themed folk art painting from the flea market. Lol.*
>
> *Can you help me with outfit lol*
>
> *i wanna own a house upstate with you lol*
>
> *guy looked like 18, ate too many tacos, went to a palm reader at 2am lol*

At first, I read the lol as a gesture of self-negation. It diminishes the person's own investment in the activity at hand.

> *im gunna start writing a novel lol*
>
> *I paid 600$ to have a psychic predict my future husband's job. Lol.*
>
> *lol i quit my job*

I realize on a second read that rather than diminishing, the authors are acknowledging the distance between themselves and the action they are describing. LOL, to say: I am the narrator of my own life, and I watch myself as a character with motions, desires, thoughts, and hopes. The distance is protective (wall), but it is also constructive and affirming. I can tell the story as I please. I am the artist of my own life.

The only Nietzschean aphorism that stuck with me from my freshman philosophy survey:

> *What, if some day or night a demon were to steal after you into your loneliest loneliness and say to you: "This life as you now live it and have lived it, you will have to live once more and innumerable times more; and there will be nothing new in it, but every pain and every joy and every thought and sigh and everything unutterably small or great in your life will have to return to you, all in the same succession" […] Would you not throw yourself down and gnash your teeth and curse the demon who spoke thus?… Or how well disposed would you have to become to yourself and to life to crave nothing more fervently than this ultimate eternal confirmation and seal?*

When Nietzsche's little devil comes up on our shoulder and asks us if we would live our lives infinitely over again, it is hard to say that we would still want to be that girl who hooked up with her ex at the holiday party again (lol). Nietzsche asks: *What would it take for you to affirm your life?* And indeed, how hard to validate our many moments of weakness, collapse, desperation, rage; or else, our desires, our reaches, our aspirations—writing the book, quitting the job, suggesting we move in together! Except, for Nietzsche, it is not the action itself that has inherent value, but the way you play the tape—how you frame and reconstruct the moments. To say that you spent two hours on Instagram again is to say, I am trapped in my addiction. To say *I spent 2 hours on my phone, lol* is to say, I am one step removed from my actions; tomorrow I will be different. Conversely, *I want to write a novel lol* is to recognize that such an endeavor is so grand it will require more fortitude than just a little texted vow—and yet—within that space of awareness, the space between myself and I, opened up by lol, I will be able to begin.

These three little letters say nothing about laughter. Instead they say: It may be small, but it is my life and I am its author. Or maybe that's taking it too far. Who's to say. Lol. ■

GUILLOTINE(/ˈgilə͵tēn, ˈgē(y)ə͵tēn /) n, vb. 1. You might object: the guillotine is the great thwarter of decay. Thwack and there goes the head! No cancer, no malignant tumors, no slow descent; just your youthful charm and energy, preserved in that sphere of self once located atop the shoulders, now rolling gracefully through the throngs of eager onlookers. Or perhaps, thinking of decay, you picture the lonely structure, abandoned, left rotting since its last appearance on the public stage in 1977 (for the French criminal, Hamida Djandoubi). 48 years of disuse. A technology of the past.

It's true that the guillotine's purpose defies decay and its structure is more out-of-use than falling apart. But I'm less interested in the machine than I am in the decay of the name: Joseph-Ignace Guillotin. Some decay strips the outer layers to re-

veal the machinations underlying a human facade. No one named Alexa and Siri will ever be free of the robot that lurks beneath their names. Their humanity has been subsumed by the machine that was once meant to imitate them. Guillotin, a physician dedicated to ending capital punishment—the only thing left of him, the name he lent to that murder machine. ■

2. In 1791, in the midst of class revolution and inspired by the *Declaration of the Rights of Man*, Guillotin stood in front of the National Assembly of France and proposed that—if they couldn't do away with capital punishment once and for all—they should use a machine that would do the deed in more humane manner. In his own words, "Like a cool breath on the back of the neck…The blade hisses, the head falls, blood spurts, the man exists no more … With my machine, I'll have your head off in the blink of an eye, and you will suffer not at all." This tool would be more democratic and compassionate, he claimed, swiftly ending the lives of rich and poor alike.

Before Guillotin's machine, death—in addition to life—had been divided by class. In France, the proletariat were hanged in the streets on lampposts. Beheading was reserved for the aristocrats, and even the most practiced professionals were prone to mis-hits. Some notably thick necks (or dull blades) include French general Duc de Lally whose five or six swings from the first executioner required another to step in, and Mary Queen of Scots, for whom at least two hacks were required before her head was wrested from her body. By requiring that everyone die the same way, the new beheading machine ensured an aristocratic end for all, and therefore to none, and if that's not democratic, Josephy-Ignorace didn't know what was.

At first, the people were skeptical. Guillotin was mocked—his proposal seemed almost like science fiction. A derisive song became popularized on the streets that made fun of this proposal:

> *The deputy Guillotin*[Ann. 2]
> *In the medicine*
> *Very educated and very smart*
> *Made a machine*
> *To purge the body of France*
> *From all people with projects*
> *That's the guillotine, hurray*
> *That's the guillotine*

Guillotin tried to distance himself from the machine that was to serve the purpose he disagreed with and the proposal for which he was shamed. What's more, he refused to create the prototype of the machine when it was finally taken seriously (the honor went to Tobias Schmidt, a piano maker). And yet, the song was already stuck in the heads of the people, forever binding him to the device. ■

3. An estimated 20,000 people were beheaded by the machine in the course of the French Revolution. On Christmas Day in 1793 alone, 247 people met their maker on the block. Made with compassion in mind, the guillotine turned death sterile, modern, and ubiquitous. Democracy, lest we forget, also diminishes the individual; if all are equal, none stand out. At least to be hacked to death means someone comes into contact with your particular body. Mary Queen of Scots got the recognition of two hacks, as opposed to the countless hordes who, being severed from their bodies, were also severed from the specificity of being an individual with sinew and bones in specific places, with as many specific difficulties ending their lives as there were living them.

What's more, the supposed humanity of the whole process soon came into question. One woman's head, recently executed, was held up for the crowd to slap, her cheeks purportedly blushing. Doctors began to study patients condemned to the block. A study in 1956 reported that death via guillotine "is not immediate… every vital element survives decapitation. The doctor is left with this impression of a horrible experience, of a murderous vivisection, followed by a premature burial." Around this time, a chaplain at a prison insisted he could, after decapitation, "see the condemned man's eyes fixed on me with a look of supplication, as if to ask forgiveness." Studies have since corroborated these accounts: something like life, or at least the registering of pain, continues on for minutes beyond the decapitation—up to 15 seconds in rats, and up to 8 hours in the case of eels.

If we take these to be true, it suggests that the line between life and death, when crossed too quickly, accidentally creates a kind of bridge. As in *Sula* by Toni Morrison, when the soldier at war sees a man's head blown off, but his body "[running] on, with energy and grace, ignoring altogether the drip and slide of brain tissue down its back," or Dr. Frankenstein, whose monster is created from the parts of the dead. The guillotine accidentally births something beyond-human: life beyond death, awareness beyond comprehension. This half-hu-

man-beyond-human comes to us as a rebuke against optimization, against machination and the promise that with enough technology, life and justice can be clean and controlled—a rebuke against the hubris of killing another person at all.

And like the head that lives on, sensing and gasping and blushing, so does the name Guillotin, severed from its human form, subsumed by the machine that came to define the man. Yet even in the most sterile of mass executions, humanity cannot be totally sanitized—a little piece remains clinging, like a flag ripped up in a storm. ■

4. According to a number of informal Reddit surveys and my own anecdotal experience, the past 5 years has seen a significant uptick in guillotine related memes, often directed at celebrities with ostentatious displays of wealth or corrupt politicians. In 2020, a tweet circulated showing Bernie Sanders leaning over a white board, entitled "Plan C" with a picture of a guillotine underneath it. More recently, a mock guillotine was erected in protest of Trump's election, and one tweet, featuring the tech billionaires at the inauguration included the caption: "One day comrades this will be the queue for the guillotine." It has become fashionable, aestheticized, internet-sized, meme-ified. One 2024 *Fashionista* article introduces the new, hot hairstyle, the "Guillotine cut" a "messy, cropped style that harkens back to post-revolutionary France." The guillotine has become a guillo-meme.

But just as fast as fashions change, so could the guillotine be turned on the masses. In the same way that it turned on its progenitor by taking his name, it also turned on the Revolutionary faction that had once employed it to enforce the Reign of Terror. Robespierre, a proponent of the machine to penalize "opponents of the revolution," ultimately faced the blade himself. The guillotine, then, represents the whims of the masses, the caprice of political favor. It is a symbol of a true democratic impulse verging on the anarchic—everyone will be killed the same way, and anyone could be killed at any moment. Bob Dylan knew this when he wrote "It's Alright Ma (I'm Only Bleeding)":

> *"And if my thought-dreams could be seen*
>
> *They'd probably put my head in a guillotine*
>
> *But it's alright, Ma, it's life, and life only"*

He paints a world in which the guillotine, like all things, has been turned against the radical, to suppress and deny individual thought. Quickly, it changes from friend of the revolution to Big Brother. In fact, the French name for the "guillotine hairstyle" is "coiffure a la victim," or hairstyle of the victim. And this title is appropriate because the identity of the victim is ambiguous: could be you or me, or anyone.

The question remains: Is the guillotine a tool to punish the elite or to oppress the masses? The way it is used on the internet seems to suggest the former; it is an image that conjures the desire for violence to turn the robots against the powers that be, to see and feel that mass violence can be in the hands of the people, not because it's more humane, or more efficient, but because it would be a force powerful enough to decimate the 1%. But even that has a doubleness. The same philosophical principles that motivated the creation of the guillotine mirror the ethos of tech startups today. *Make death more efficient!* The pitch to the VC firm reads.

Indeed, the people who promote the same theories of efficiency and egalitarianism are the tech billionaires who created or run these platforms in the first place. Because what is Facebook, or X, but a social media platform created *purportedly* in the name of "the people," in search of more efficient and decentralized news, more direct modes of communication, when in reality they centralize the power and wealth in the hands of the few technocratic elite. And yet, as these many Tweets suggest, the double-ness of the whole discourse is that it's precisely the founders of those platforms themselves who would be the target of the guillotine; these same people who have profited off the promise of more democratic discourse at whose necks we point the guillo-meme. "If a billionaire is telling people a 40 hour work week is for losers then it's time to bring back the guillotine." This is a post about Elon Musk on X, owned by Elon Musk.

And so dog-like, it chases its own tail, it attacks its makers, its proponents, while Guillotin himself lies headless, his name living on beyond his body. The guillo-meme is empty, open, un-affiliated. Critically, the guillo-meme is not guillotine. Neither is the haircut. It is an image, a facade, a symbol. It is more a description of a feeling than a physical force. Which makes me wonder if the

guillotine today doesn't actually symbolize the violence we would like to enact, as much as it is a manifestation of the severance that most Americans feel already exists.

To desire that violent acts befall the richest, most corrupt among us is one thing. This bloodlust—while fearful—appears to me hopeful, or at least active. Here, a machine that can solve our situations! The guillo-meme, on the other hand, is a symbol, a representation. It's passive, inert; it is, after all, an image. It seems to me that the online discourse is there because it is just that, discourse. That we look around us and see that technocratic elite run our lives, our worlds, even the sites on which we impotently shout the protests that they don't mute because of the power accumulated with each new post. The guillo-meme is not hopeful, it is a sign of what has already happened—we have been cut off from the people who run our worlds, and there is really no hope of us restoring that power to "the people"; it was like having my picture taken after I got a black eye: both disturbing to see myself with a bruised up face, but also comforting because it is accurate. The pain I was in manifested in the external world.

Herein lies the real decay of the machine. Once, it represented promise—if a fearfully capricious one—of retribution. Now it merely represents what already is: that fumbling mess of a body politic, living painfully separated from its own head, writhing frantically on the chopping block. ■

TEXT (/ tekst /) n. vb. 1. Some decay is just a front, a pockmark on the surface. Text, for instance, as the structure; text message, a decay that corrodes the outer layers—chipping, peeling and nibbling—while leaving the fundamental structure intact.

Physical text is both the container for language and the language itself. The Bible is a text, but the quote "Search from the book of the Lord, and read" (Isaiah 34:16) is also text. A text message, on the other hand, is contained on a device in which its location is not immediately apparent. The phone or computer contains the messaging application which contains the little blue or grey or green bubble which contains text. And that little green messaging app icon is buried between non-texting content: SNL monologues and pictures of your nephew, a note to remember to take out the trash.

To find the text message isn't merely a matter of flipping to the right page. Sometimes, as in the case for all my messages between August 2017 and March 2018, text messages disappear based on some mysterious law of storage. You can lose a Bible, but—upon holding it—you will not lose the text it contains. Give me the Old Testament and I will have Isaiah 34:16. Give me a phone and I may not have Kathleen's request for pad see ew on Dec 9, 2021.

While the text as a literary object has a general intended audience, the text message is direct one to one, audience focused. The text is universal, spiritual, social, and existential. It asks big questions, makes claims: *It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife.* The text message is practical, pragmatic: *what's ur ETA?*

These are serious grounds in the case for the significant, structural decay of text. But before reaching any conclusions:

> *Let's return to the text*
>
> *Let's return to the text* my father, the classics professor, might tell a student, at office hours, when he has failed to understand the irony fundamental to the Socratic dialogues.
>
> *Let's return to the text,* I might say it to my own class when they begin to philosophize about whether Toni Morrison did or did not know the correct method for hard boiling eggs in *Song of Solomon.*
>
> *Let's return to the text*, the rabbi says, and all heads bow over their books. ■

2. My friend Susannah turned 31 and immediately required the kinds of glasses that allow her to read things up close, but render the distant world blurry. This wasn't a problem until she began teaching a seminar that requires her to shift focus between the book in front of her and the class out beyond her at a rapid pace. At dinner, she mimics the motion, frantic and inconsistent, glasses up, glasses on the bridge of nose, peeking under, over, back. *Girl*, our friend tells her, *you need progressives.*

But the point remains, she says, that each day she comes in and feels she must make a choice: text or class? It is profoundly paradoxical that to look carefully at the text would render her blind to the reactions, social nuances, and expressions of the people for whom she is supposedly helping

open the text. It begs the question. Can you care for students and also the words at hand?

Susannah picks up on the ways that *returning to the text* is, in the worst moments, a method of crowd suppression, a shield from the simmering social currents flowing beneath the class. Perhaps Susannah's bifocal binary suggests that the class itself is a Text from which the teacher averts her eyes. I don't think that it would be so wrong to expand our fundamental notion of "text" in the first place.

Let's return to the text. ■

3. Etymologically, *texere* is the Latin verb which means to weave.

Historically, women wove stories into their tapestries, but the time they took to weave also allowed them the space and audience to speak their stories—to pass on traditional mythologies, and oral histories. Thus, weaving has to do with the physical fabric of the text only at one level. More significant is the fact of returning to the loom, to tell the story, a kind of weaving itself. Because what is to weave but to waver and return? To pass under and over, to stray and steady in search of a central purpose.

Similarly, *returning to the text*, might be less about the text itself and more about the return. *Let us return*, then, might be a reminder that our whole lives are a continual process of erring, wandering, and then coming home.

Once, I was writing a letter in which I wanted to reference the relationship of weaving to storytelling, of which I had some vague notion. I found an article that detailed every connection between women, storytelling and weaving in Ancient Rome and Greece. I scrolled to see the author, and realized it was my father. Somehow our mutual interest in this niche topic emerged in our heads separately, organically, like the evolution of the same plant on distant islands. However many miles I was from the Bay Area, I had not strayed so very far. I found myself a part of a fabric; the self as text, woven with father and mother and things far beyond the knowable realm. ■

4. *Let us return to the text*—is not *quiet down*, not *I don't want to look at your faces any more clearly than this*. By saying *let's return*, I or my father or the rabbi or my friend Susannah act like a coach, directing a collective motion, the twist and push of return. Perhaps the book in front of the class isn't inevitably their text; yet, by all focusing on the same words, the same page, it becomes the text. It is *the fact of the return* that makes something our text.

In this case, possible texts might include: the stirring of the class at the end of the period; the naked branches of the tree outside; the debate over hard boiled eggs; the quizzical look in the eye of the lover; the image of red wine splashed on a white shirt; the use of a comma instead of an em-dash; a Bible; my father's paper on Mythical Storytelling; the neon sign that flashes ICE CR AM outside my old apartment.

If it is the return that makes the text, then we must first ask what it looks like to return.

In meditation practices, you begin with a seemingly simple task: to pay attention to the breath. Simple, no? You just sit here and pay attention to the in and out and nothing more. That is your only job. Easy! You could be paid for this. Breath one breath two, breeze by no problem. And yet, within the space of 10 seconds, you find yourself meandering. Piles of unfolded laundry rise in your mind like ghosts, twisting into the strange interaction with your boss at the printer (hey boss!), and the sore throat that's been growing more undeniable these past few days, which could be Covid or perhaps even cancer. These images emerge and mutate and dissipate with unrestrained fluid force, until you realize that how many? 20? 200? Breaths have passed you by, unwittingly, in the haze of chores and poorly phrased pleasantries. And, realizing this, all that is left to do is to return to the breath.

It is hard to return. It's hard to return to the breath because it requires you wrest yourself from your natural habits, your mental patterns. It makes you relinquish the images that disguise themselves as your self, and instead commit to the physical world of the present. That is painful, it requires honesty, seeing what's really there rather than burying or distracting.

It's telling that there's an ancient entanglement between the breath and text, between the *pneuma* as air and as spirit. To exhale is to release—to write a text is to exhale meaning; to read, a kind of inhaling, accepting the new, which can be discomforting. To breathe, to read and write, is to be in a constant ongoing cycle of meaning making.

It is exhausting, for returning to the literary text is equally painful, disagreeable, hard as returning to the breath. Close reading makes it so you can't make up what you think is true, forces you to look at something that is other

than you to try and understand it. This process requires failing, rereading, and trying again. It is vulnerable to look at the language of Ovid's *Metamorphosis* or *Middlemarch*, and say: *I don't understand what is happening here.* And to return nonetheless. ■

5. *Let's return to the text*

Texere implies an elaborate nature; to weave with intense care. Again, the process takes precedent. To read carefully could look like weaving carefully. The important element is the attention to nuance, the care-ful-ness. That is to say: reading can be a form of writing, and it is all a form of care.

This implies the mutuality between the spinner and the listener. One requires the other, and in order to become the teller, one must have once been the audience. The two weave together. *Let's return to the text*, too, with its LET'S, LET US, implies this collective nature.

So with text messages. ■

5. We return to the texts

you remind me of my cousin, Katie's improv crush texted her last week. We ask the relevant questions: Is the cousin hot? Is their dynamic sibling-like? Does the improv crush have a thing for cousins?

Need you here next sunday; remember to fold the black mat before closing. Ellie cannot determine if the semi-colon used in her boss's text is dismissive, passive aggressive, or unconcerning. We look through his past 5 texts and count the uses of the semi-colons.

George has received an Instagram DM of a picture from his ex-girlfriend. In it, she is dressed in a wedding gown, phone up, neck elongated, veil off, in the mirror. It appears, we surmise, to be the night before her wedding. And so this is what? A last hurrah? A cry for help? A drunken thought? A goodbye?

For George, Katie, Ellie, we perform the same holy ritual as with a text in class, as with a tapestry being woven. We weave with the same attentive routine, the same *return*. ■

6. *Let's return to the texts*.

My father has been texting me recently. His are special in that they are very long and very often they are a single Text. These missives are most often dedicated to his most recent landscaping projects—I recently received three seemingly identical pictures of the backyard wall, each apparently with a different layer of stucco. Sometimes they are also updates on his last classes before retirement: *I find I enjoy teaching but not as much as not teaching*. Sometimes, they detail the desserts he has been eating, or how school is going for my little sister: *Alexis missed 3 days of class last week with a cold/flu … I seem to have avoided it. And by "it" I mean the disease, not Alexis.* They are funny like that, and comprehensive: *Well, that's all the news that is fit to print.*

I send them to my friends, and I show them to my girlfriend. She says, "you're his diary." I look back through, trying to see each new layer of stucco from his eyes, trying to imagine a world in which all his obsessive analytical powers which for many years pointed at the *Metamorphosis* and *The Aeneid* and the *Iliad* now focus on the yard, the irrigation ditches he digs, the new banjo he recently bought, the fact that he is a year closer to death, that he has few friends left, that I am one of them; over and over, I *return to the text*, because it amuses me, it pricks me, it hurts.

Sometimes we learn more about ourselves by asking what texts we continually return to. In this case the difference between the text, the texts, and the world as text are negligible: Because a text is defined by the pursuit without arrival: A motion, a weaving, a constant return. We dig and we dig, even when something is ultimately unplummable. Katie to her crush, me to my father, Susannah to her class, my father to the *Metamorphosis*, to his irrigation. To return is to deem something worthy of being a text, it is to say *I will never reach your depths, and I will never stop trying*. And what is closer to love than that? ■

CONTENT (/ kən'tent /) n, adj.
1. Some decay looks like proliferation and diffusion. What was once a structure is now microscopic, ubiquitous, a part of the air we breathe. And without its edges, it's meaningless. ■

2. A Brief Interview About Content

Q: What do u think of when you think of content
A: I think of videos
Q: Why
A: Photos are photos and videos have more
Q: Stuff?
A: More stuff.
Q: Content is about stuff
A: Yes. ■

3. There is something funny in the double edge of content / content.

To be c-UH-ntent is to be satisfied. To be sated. To be full, filled whole and complete. Contentment is perfection. Perfection

is never in need of more. A perfect circle, a pure diamond. Impossible, stagnant, divine.

C-AH-ntent is the thing that fills the basket. With it, may you never be c-uh-ntent, for c-ah-ntent is capacious, open-ended, it eats all that it sees, and it—never having clear boundaries for what defines it—will never be complete.

Uh vs *Ah*, the perfect circle and the insatiable void. It's strange that the *uh*, a sound of equivocation, would lend itself to the sigh of contentment, while the *ah* of achievement, relaxation, satiation, is the signal for the open question, the substance that never quite seems to fill up its container.

4. *Into my heart an air that kills*
From yon far country blows:
What are those blue remembered hills,
What spires, what farms are those?

That is the land of lost content,
I see it shining plain,
The happy highways where I went
And cannot come again.

This is a poem by A.E. Houseman about his lost boyhood. There is something about contentment that cannot be reached in the present. The past is better than the present, it says; I miss my boyish days, it says. If we read it doubly, though, I think it tells us something about the way that contentment might dissipate into content:

That is the land of lost [c-AH-ntent],
I see it shining plain,
The happy highways where I went
And cannot come again.

There was no such *content* when he wrote the poem, but it wouldn't be so far off to imagine a parent reading this today and the second version relating more to their struggle. In it, childhood is a place of infinitely missed opportunities to document and to replicate. To create an experience of the experience, a simulation of the experience—to create *content*. And so what is lost is not the experience, but the infinite moments of capturing them. Life becomes about recreating life. This is the relationship we have today with the past, the way that the promise of content denies a kind of contentment.

Both ways, the loss is haunting. ■

5. Picture this:

A be-sequined bag with little rope arms placed at the table in front of the eager child. Perhaps she has on a birthday hat, string pulling tight at her chin. She wades into the bag with her tiny hand and pulls at the pink wrapping paper within. Then, some more. She turns quizzical, licks her popsicle cheeks, seeks further, determined. At first delicately and then with ferocity, vigorously like a jungle cat pawing at its prey waiting for it to move. Except it doesn't. Endless pink paper sails from the bag, ripped and shredded in her fiendish frenzy.

This is what we do with content, what it does with us. It calls us to devour it and in the process, we devour something of ourselves, our dignified posture crumbles into an animal form. Perhaps someone takes a video of our desperate descent, and yes, then, we have become content. ■

BOOBIE (/'bu:bi/) n. 1. Like mold trapped beneath the facade of fresh wood, sometimes decay happens from within. With language, the signifier stands, leaving the word with nothing to refer to.

The child grasping for its life source; the 6th grade boy who can't bring himself to say *breasts* in Sex Ed; the same boy, a few years older, leaning against a high school hallway, smoking a blunt and emitting the phrase to his friends who giggle through a cloud of smoke. *Boobies*. Its use, undeniably goofy, implies an arrested development, the desexualization of what might be seen as attractive, or the sexualization of a biological function. It can't help but find itself at an uncomfortable impasse.

Colloquially, the term is turned upon these silly boys: "Compared to the civilized and educated European, the American seemed a boob," J. T. Farrell writes in his 1932 novel, *Young Lonigan*. The boob is a "simpleton, a philistine, a bore." Culturally, it is almost universally male, spoken by an underdeveloped man, or as an insult directed at the same kind of man.

It is therefore satisfying that the term *boobie*, in my family, has found a place outside the mouth of either a hypothetical stoner or hungry child. For us—and perhaps for others of Ashkenazi origins—boobie is a term of endearment between the women in the family. The phrase derives from the Yiddish term "Bubala," which my grandmother and her own mother used to call each other. Bubala is diminutive for "friend" and translates to "little sweety" or "sweetheart." Ironically, neither of these women were particularly *sweet* (my grandmother, best known for her inventive obscenities in English, Swahili, Yiddish,

and whatever other language crossed her path). And so perhaps it's appropriate that, when passing the term on to her daughters, it permuted into "Bubbie" and later, "Boobie," a cross between obscenity and endearment that suited my grandmother, and her mother before her. When my cousin Sophie and I were born, we too, inherited Boobie.

And what of the actual boobies? In the 80's, my grandmother battled a form of breast cancer that left her without one breast. The result was a sock, placed inside a bra, and the family game: *guess which one?* in which the grandchildren, without touching, had to guess which boobie was really a sock. Given that none in the Blumberg family were blessed with particularly impressive knockers, the game proved challenging and endlessly entertaining. My aunt, plagued with various cancers, also lost a breast, though she had it surgically replaced before I came into consciousness. It was only in my senior year of college in 2018 that she faced another form of cancer—one of uncertain origins—that took her life. At the funeral ceremony, my mother spoke about how she never expected to be left alone, without her other Boobie. And who does?

My grandmother saw the death of her daughter and followed, six years later, last fall.

Just around that time, my cousin Sophie, realizing that they did not want to risk the cancer that killed their mother, and already not feeling particularly attached to their female form, got a double mastectomy. Thus, the boobies diminished by two, literally, but already two, figuratively, were gone.

It remains a term we use for each other, even for my male cousin, because gender has become an increasingly irrelevant qualification for anything, and with our numbers limited, we need as many boobies as possible. But each time we speak it, there reverberates the quiet tragedies and absences that precede it—my grandmother, my aunt, and all of the lost boobies. Like the body that decays from within, so too with boobies. The word has come to mean its own absence. ■

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Apocalypse When

Zachary Loeb

There is a tendency to remember Y2K as the apocalypse that wasn't. Media reports at the time ranged from cautiously skeptical to outright hyperbolic (*Newsweek* ran a cover story called "The Day the World Crashes"). Religious leaders declared the event biblically preordained, comparing "advanced computer technology" to the Mark of the Beast. There were Y2K-branded survival guides, from both anti-government conspiracy theorists and left-leaning institutions like the *Utne Reader*. A made-for-TV disaster film, aptly called *Y2K: The Movie*, featured Ken Olin as a "Y2K troubleshooter" battling a panoply of catastrophes, including a nuclear meltdown near Seattle. When Olin's daughter cries, "I'm so sick of Y2K!" she could have been speaking for many.

Whether you remember the pre-millennial era with residual anxiety or — perhaps more likely — with laughter, you are probably recalling all the doom-mongering, followed by the anticlimax. Or perhaps you are one of the many people for whom "Y2K" has come to refer to a moment in culture and fashion, rather than a computer crisis. On the fateful night itself, as the counting reached zero-zero, people downed drinks and embraced their loved ones under explosions in the sky — maybe, for some of them, out of relief, but mostly because that's what you do on New Year's Eve. It was pretty obvious pretty quickly that the world had not ended.

Two hours into the year 2000, John Koskinen, the head of President Clinton's Year 2000 Conversion Council, stood before the press, explaining *why* the world hadn't ended. Over the following hours and days, Koskinen would hit the same basic details in press briefing after press briefing, walking the line between calm reassurance and insistence that yes, there really had been a problem in the first place — a problem that Koskinen, along with countless others, had spent years working tirelessly to fix. He was "pleasantly surprised" with how well the turnover had gone (although quite a few problems *had* occurred, then been caught and quickly fixed). Testifying at Congress's final Y2K-related hearing at the end of January, Koskinen responded to general accusations that, in his summary, "Y2K was an insignificant problem, hyped by the media, computer consultants and those with other reasons for hoping the world as we know it was about to end." The lack of calamity, he stressed, was not due to chance, but to years of serious and sustained work to avert it. An assessment which, to be clear, was shared by the bipartisan members of Congress at that hearing.

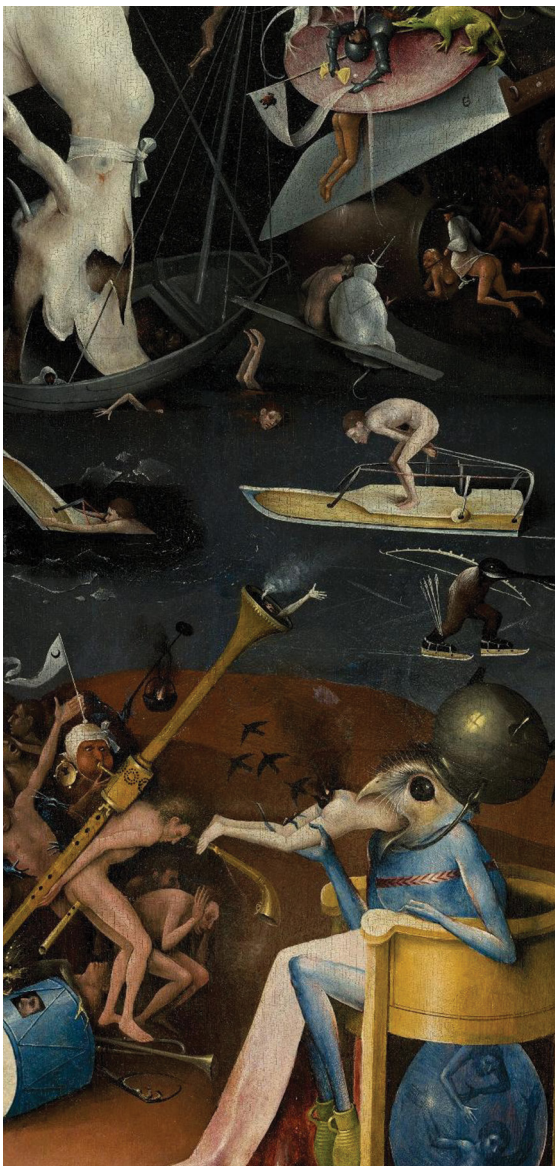
The truth was, before the year 2000, nobody knew exactly what would

happen, or how bad it would be. Most Y2K experts in the lead-up to the changeover were predicting something akin to a decidedly non-apocalyptic "bump in the road." But all they could say was that *some* disruption, of unknown degree, was possible; and that's better than guaranteeing catastrophe, but not necessarily more reassuring. Predictions of impending doom tend to feature an alluring mixture of easy-to-imagine imagery, coupled with an appealing sense of certainty. All-out cataclysm is easier to imagine than a slew of technical issues; the dashing hero averting doom at the last second is more fun to picture than an army of IT professionals spending years dutifully tapping away in front of their computers.

But there was another major crisis at the heart of Y2K, one less remarked on, and less bombastic than apocalypse at the ball drop, but no less serious; and, more perturbingly, never truly remedied. It wasn't the possibility that the world would end when 1999 became 2000. It was the fact that the world people *thought* they knew had ended already.

Ø

In computing's early days — back when a computer was still a room-sized, very expensive mainframe machine that relatively few people had access to — computer memory was precious. Given the expense of the machines themselves, management was eager to save money wherever they could. Thus, various computer professionals hit upon the idea of saving memory (in other words: saving money) by truncating dates: lopping off the first two century digits, so that 1960 would be recorded simply as 60. This solution was widely adopted because it worked: the date-related calculations that computers often performed didn't need those two century digits; it was in keeping with the way people generally talk about decades; and it did save money. After all, 1999 minus 1939 equals 60, and 99 minus 39 also equals 60.



Of course, one didn't need to be blessed (or cursed) with the power of foresight to anticipate problems when those century digits ceased to be 1 and 9. After all, 2000 minus 1939 equals 61, but 00 minus 39 does not. The anxiety-inducing question at the core of Y2K was: What exactly would happen when computers tried to perform routine calculations and started generating numbers like negative-61? And the even more anxiety-inducing answer was: it's not entirely clear.

The computer scientist Bob Bemer first tried to draw attention to the problem in the *Honeywell Computer Journal* back in 1971. Nevertheless, the IT community, as a whole, remained generally assured that someone else would fix the issue before it truly became a problem. The 1970s and 1980s saw some significant advances in computer hardware, but much of the underlying code remained the same. It was not until the 1990s that specialists mounted an organized effort to address the situation, by which point they had their work cut out for them.

What most of the technical experts agreed on was that a variety of things could happen when computers began to encounter those strange dates. There was the dreaded scenario, in which the problematic dates lead to programs terminating or failing, and actual computer systems shutting down. There was the annoying scenario, in which the computer systems kept working more-or-less as normal, but started to fill up with garbage data because of those incorrect date-related calculations — which, in time, could trigger the sorts of failures outlined in the previous scenario. Lastly, there was the ideal scenario, in which nothing of note happened at all.

The problem was that it wasn't clear which of these three scenarios awaited any particular computer system. Alas, with computer systems depended on for everything from national defense to banking to literally keeping the lights on, no company (and no nation) could afford to simply sit back and hope for the best. Unfortunately, the only way to know which of those three scenarios was most likely was to go in and test the code — and there was a lot of code to go in and test. The software engineer Capers Jones estimated that, in the US alone, there were over 1.7 billion function points that needed to be checked and potentially repaired — appearing in a range of systems, and being written in a host of different computer languages.

Computing had infiltrated the world to a degree that early computer engineers would have blushed to imagine, and this left later engineers scrambling to fully assess the extent. The world's computerized infrastructure had sprawled and tentacled so vastly that it took a herculean effort to even begin to map it. As IT experts got to work on the problem, they found themselves tangling with a host of broader issues around insufficient documentation, deferred maintenance, and a lack of accurate assessments regarding what sorts of computer systems (and what programming languages) various enterprises depended on. The author and programmer Ellen Ullman summarized the problem in an essay called "The Myth of Order." (It appeared in an

issue of *Wired* with an all-black cover, upon which, in shiny black text, the words "Lights Out: Learning to Love Y2K" appeared.) The crisis, Ullman wrote, revealed something that "technical people" had known for years: "that a computer system is not a shining city on a hill — perfect and new — but something more akin to an old farmhouse built bit by bit over decades by nonunion carpenters."

Personal computer usage had surged in the 1990s, especially in the US, driven by cheaper machines and interest in the nascent web. But regardless of whether or not a person used a computer at home or at work, their life was bound up with all manner of unseen computer systems. In 1998, a Senate Special Committee was assembled to consider Y2K's ultimate impact on utilities, healthcare, telecommunications, transportation, financial services, general government, general business, and litigation — all of which might be affected by the Y2K crisis. "Businesses in today's world rely on computer systems for virtually every aspect of their operation," said Senator Robert Bennett, the committee's chair, "from running elevators to calculating interest on loans, to launching satellites." In other words, a person did not need a computer in their personal life for their personal life to be heavily dependent on computers.

The "Year 2000 Technology Problem" raised some truly disturbing possibilities, the question of whether the world would blow up on New Year's Day being among the most far-fetched. Frankly, most serious Y2K experts saw the doomsday yammering as a counterproductive distraction from the actual work that needed to be done. The more reasonable, though just as unsettling questions were: What if the life we lead, and the world we see around us, is largely dictated by powerful computer systems that we don't even realize are there? What if these systems are so wide-reaching, so fundamental, but so ultimately piecemeal that even the experts don't fully understand them? *What if the computers have already taken over?*

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There were lessons to be learned from Y2K, many of which were both important and rather bland: computer maintenance matters; having a sufficiently large IT department is important; seemingly unimportant tasks like cleaning up database entries are necessary; hardware and software updates cannot be put off indefinitely; old code persists; and companies and institutions need to be aware of the underlying computer systems that support what they do. The higher-order, and more unsettling lesson was that even with tremendous coordination, we can't actually extricate ourselves from these computer systems.

1999 was the year of peak public anxiety about Y2K. (Ironically, by that time, most of those working seriously on the problem had concluded it was being sufficiently handled.) 1999 was also the year the first *Matrix* movie arrived in theaters, featuring a group of super-sleek pseudo-hackers battling a totalizing, and totalitarian computer system. In contrast to the *Terminator* franchise, computer dominance in *The Matrix* did not look like a field of hu-

man skulls being crushed beneath the treads of a robotic tank. It was a world seemingly like ours, in which people went about their lives completely unaware of the fact that they were, in fact, floating in vats, acting as batteries for the machines.

Instead of a standard apocalypse narrative, *The Matrix* built on a more troubling premise: that the real world is something entirely different than we think it is. Y2K, in effect, proved that to be the case. True, people were not suspended in strange pods with computer cords rammed into the backs of their heads. But Y2K made it quite clear that people were inextricably connected to computer systems, whether they realized it or not.

In *The Matrix*, it requires a mythical "red pill" to see the world for what it really is. In the years since the movie's release, that term has taken on some unfortunate right-wing connotations; but if we stay close to its original usage, it seems fair to say that Y2K should have been a "red-pill" moment. It could have forced societies and individuals to reckon with what the world had become — one so completely dependent on computer systems that it risked total collapse if these systems stopped working. Many people, content with Y2K's successful management, opted for the blue pill instead.

"We discovered we were more dependent on technology than we had thought," said Cathy Hotka of the National Research Foundation, testifying, with Koskinen, before Congress in January 2000. At that same hearing, Gary Beach, publisher of *CIO Magazine*, emphasized that thanks to Y2K, "There is now widespread awareness of how pervasive technology is in everyone's lives, not just those of the digital elite." The tragedy is that nothing much became of these lessons. The year 2000 arrived, followed by the year 2001, and so on, but the reckoning never really did. Planes did not fall from the sky, nuclear power plants did not melt down, the world did not end. But the world as many thought they knew it — a world not hopelessly dependent on computer systems — already had.

Zachary Loeb is a historian of technology, disasters, and technological disasters.

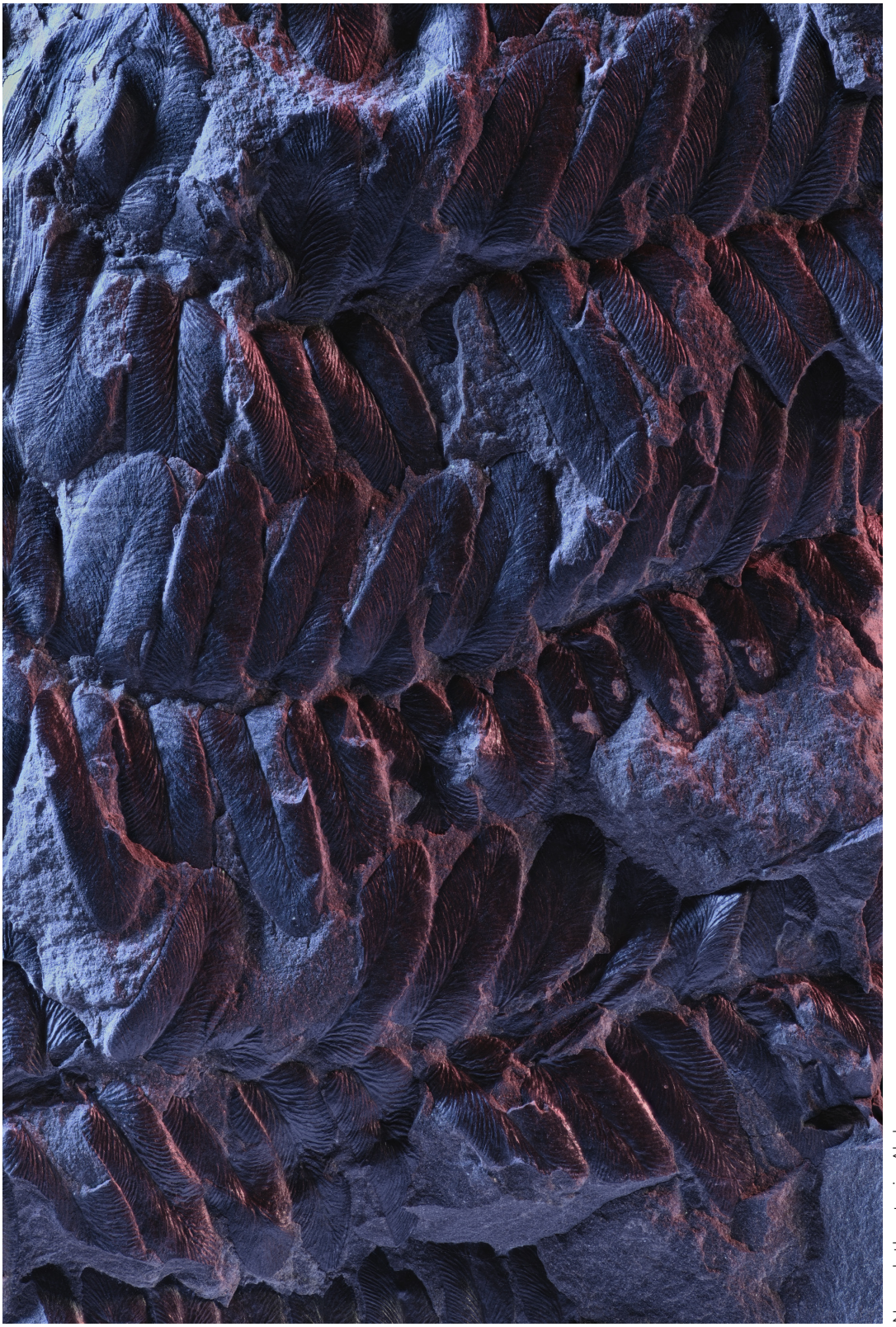
Carboniferous

Michael Wang

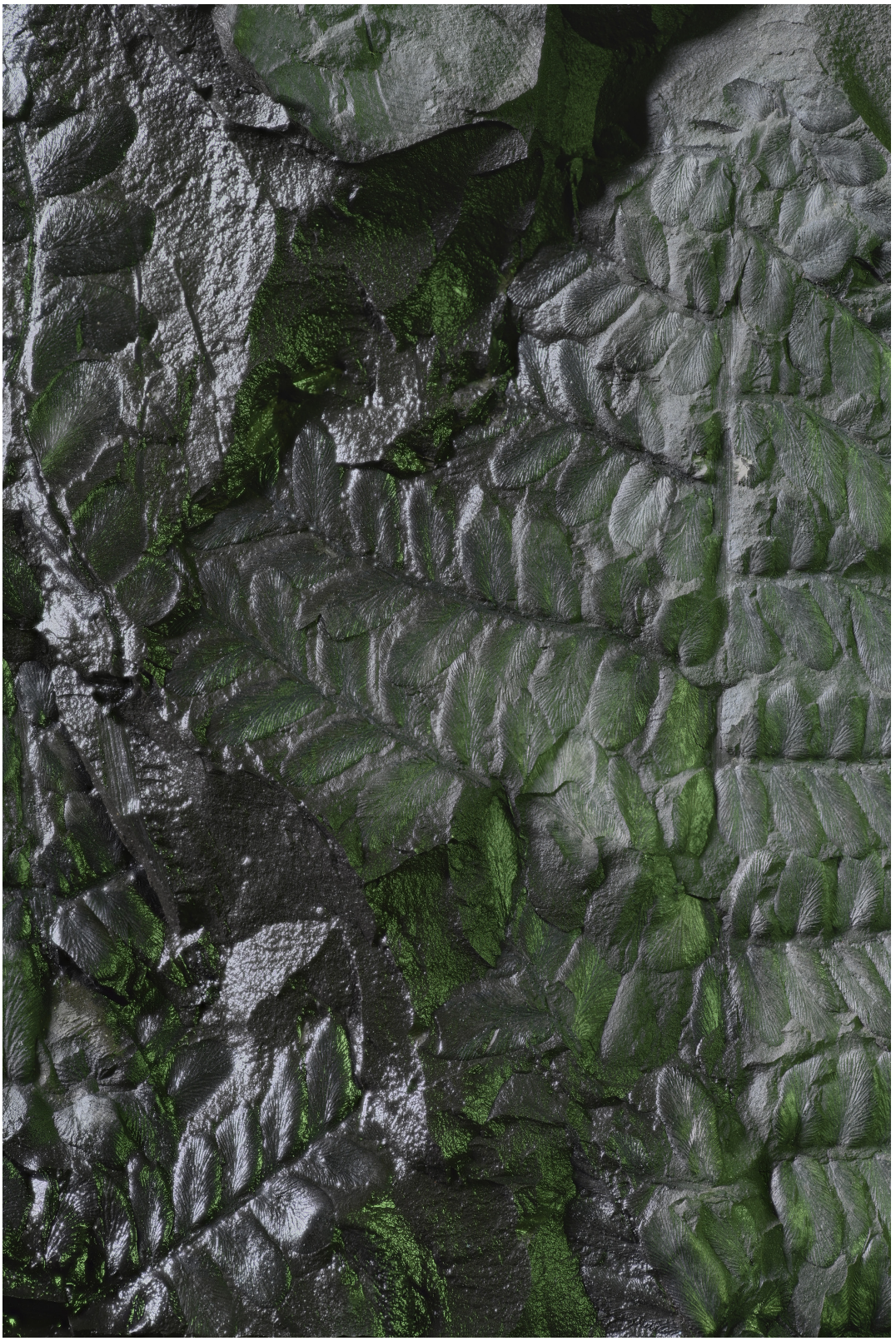
Lepidodendron, Lower Silesia

Calamites, Alabama

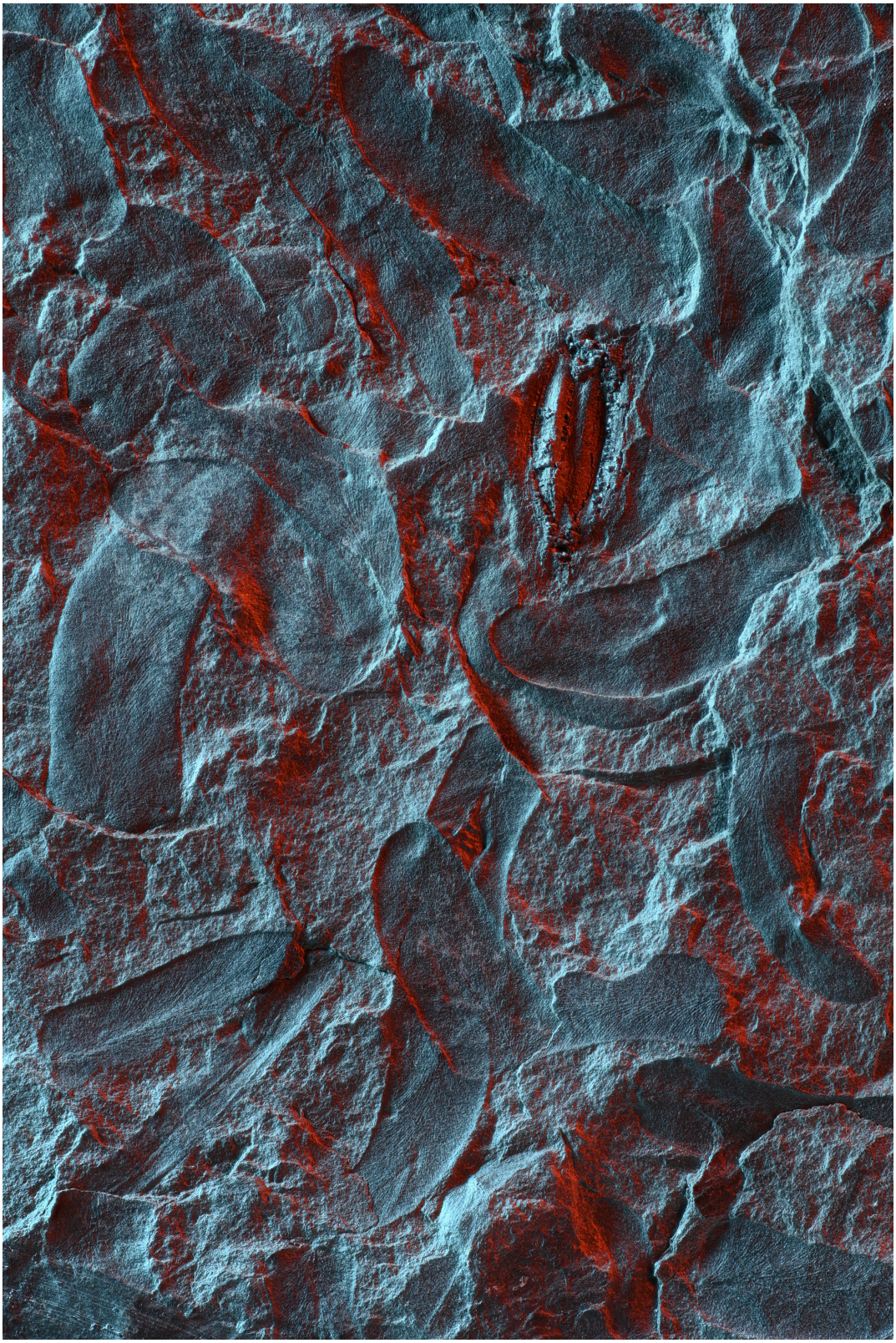
Lycopod, Upper Silesia



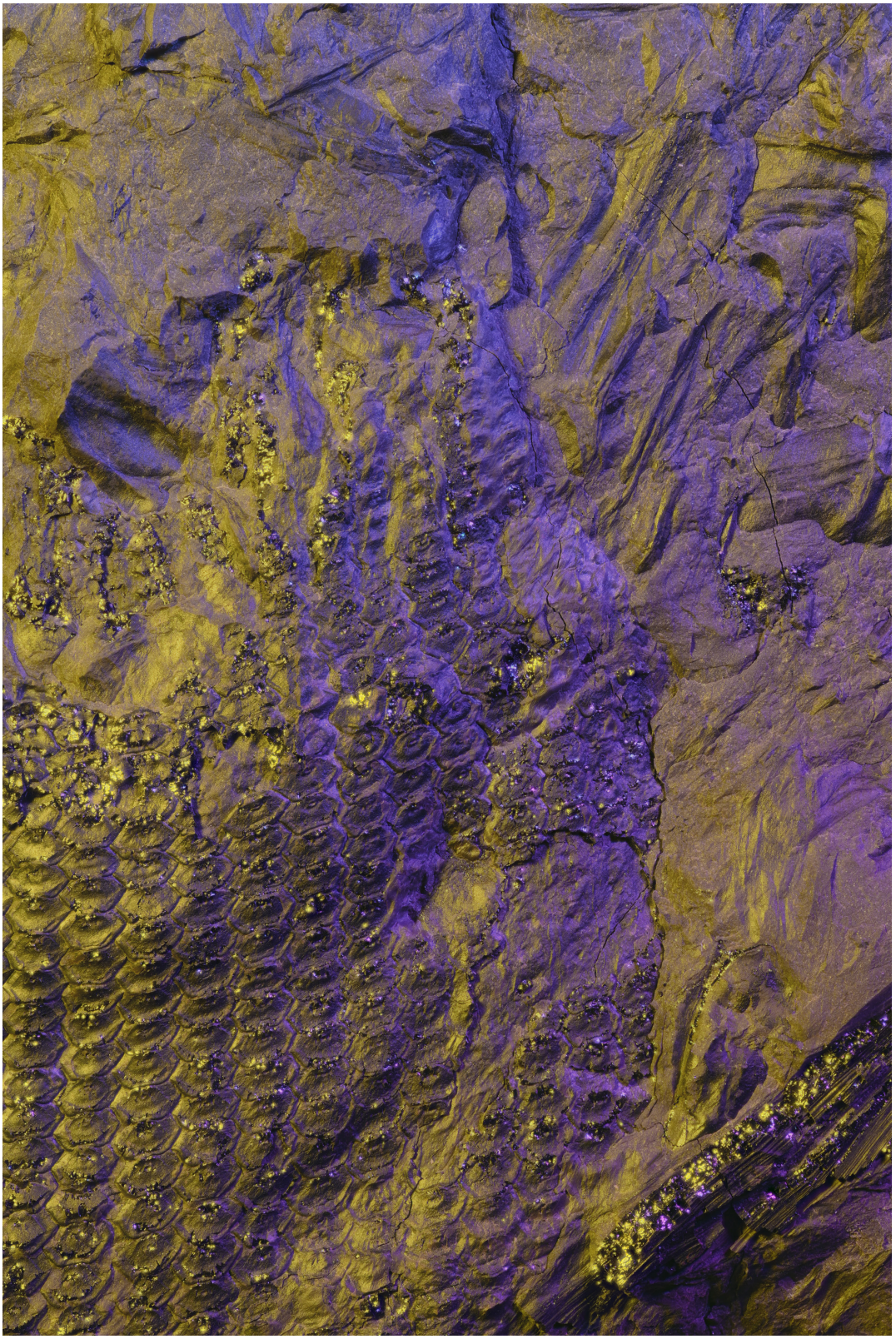
Neuralethopteris, Alabama



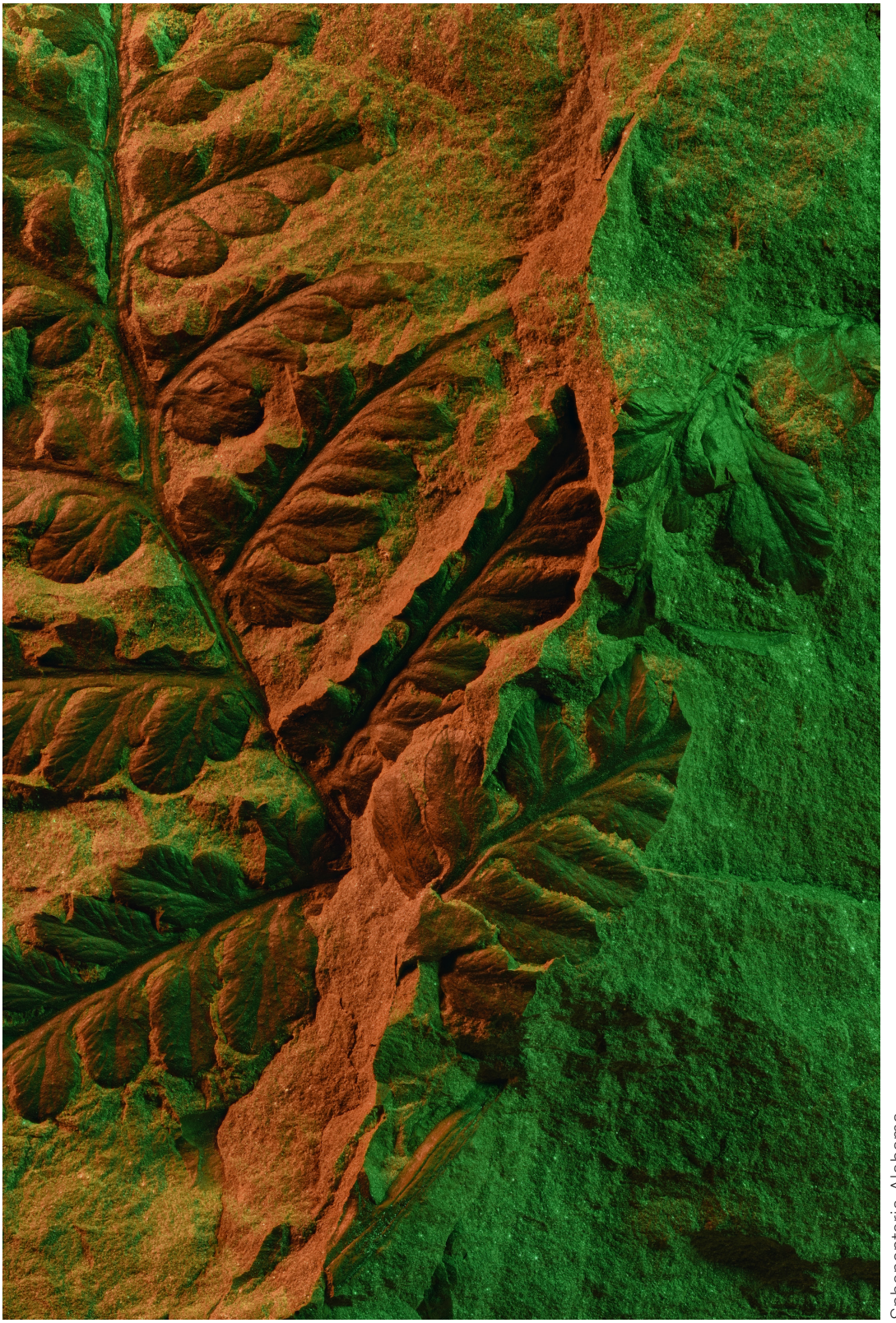
Neuropteris, Upper Silesia



Paripteris, Lower Silesia



Sigillaria, Upper Silesia



Sphenopteris, Alabama

Michael Wang is an artist based in New York. His practice uses systems that operate at both planetary and regional scales as media for art, addressing climate change, species distribution, resource allocation and the global economy. Wang's work was the subject of solo exhibitions at Prada Rong Zhai, Shanghai (2022), LMCC's Arts Center at Governors Island, New York (curated by Swiss Institute, 2019) and the Fondazione Prada, Milan (2017).

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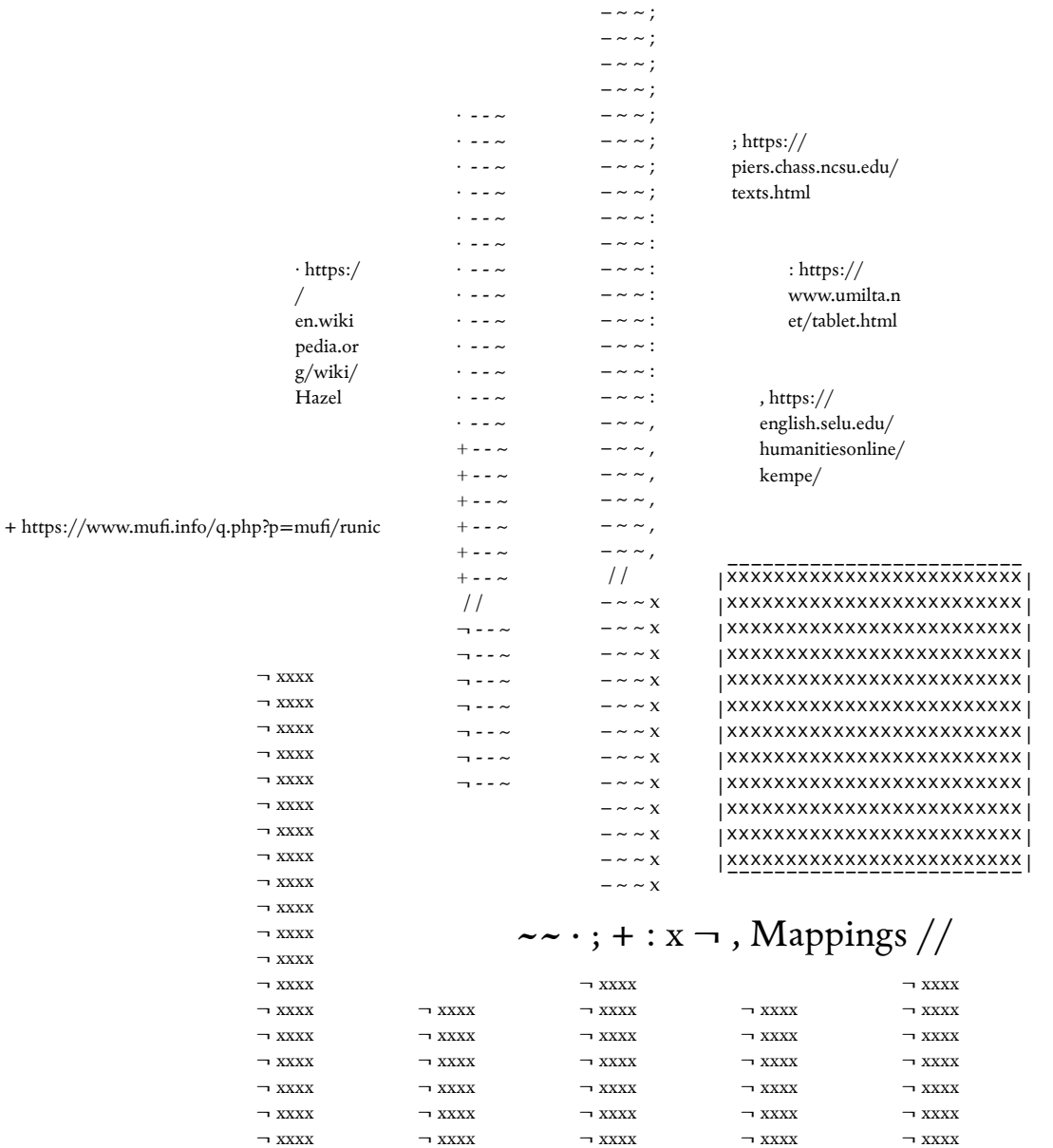

Brandan Griffin is the author of Four Concretures (Theaphora, 2024) and Impastoral (Omnidawn, 2022). He currently lives in Kansas City, MO, where he co-runs the bookstore and publishing project New Material Books.