13

Ars Autopoetica: On Authorial Intelligence, Generative Literature, and the Future of Language

Sasha Stiles

Poetry Is Technology

We all had this psychic dream about our own programming ...

—Technelegy

In his famous essay on tradition and talent, T. S. Eliot said a modern poet should write with the literature of all previous ages "in his bones." As a member of the first wave of poets collaborating with artificial intelligence, I often feel as though I am composing with humanity's written record not just in my bones but also in my brain, blood, browser. My very being extends beyond myself, enmeshed with a vast text corpus that encompasses conventional literary masterpieces, millions of web pages, cybernetic bleats and blogs, myriad dialects and masses of jargon, evergreen content, and outdated data. When I plug into a large language model like GPT-4 for a writing session, my analog intellect, trained for decades on both ancient and contemporary classics, goes head-to-head with a prosthetic or augmented imagination informed by a new kind of canon.

In my first book, *Technelegy* – a hybrid language art collection with elegiac roots and futurist branches – I use AI-powered poems as well as media-rich extensions and multidimensional adaptations of static text to probe what it means to be human in a nearly posthuman age. This manuscript began, in 2015 or so, with "conventional" poems on then-unconventional subjects like neural implants, artificial wombs, robot monks, and digital immortality, but as I started to notice experimental writers and technologists like Ross Goodwin and Gwern Branwen integrating neural networks into their creative work, I wondered where a computational co-author might steer me and my pen.¹

My early efforts with GPT-2 (ChatGPT's ancestor) – also inspired by Alison Knowles's "The House of Dust," Oscar Schwartz's Turing test for poetry,² Ray

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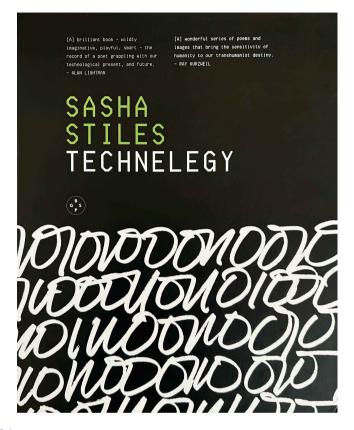


FIGURE 13.1

Cover of Stiles' book *Technelegy* (Black Spring Press Group, 2021), written in collaboration with an AI-powered alter ego fine-tuned on drafts of the manuscript and other materials.

Kurzweil's Cybernetic Poet, and a 1984 book of poetry and prose written by a computer program named Racter – were enabled by off-the-shelf interfaces developed by machine learning engineers like Adam Daniel King. Though I had no formal experience with the tools, I immediately fell in love with the way they loosened up my understanding of what poetry could be and do after years studying language and literature in conventional settings. After getting up to speed, I developed a method of translating my own writing into data sets of poetics prompts and completions, encoding copious research notes and literary annotations to create palimpsests of thought-starters – all of which I used to fine-tune GPT-2 and, later, GPT-3 so as to create a bespoke text generator. I didn't want to write with a generic AI; I wanted an extension of my own creativity, a like-minded co-author to empower next-gen brain-storming and take me to places I wouldn't dream or dare to go otherwise. Ultimately, *Technelegy* has three authors: me, my custom generator, and a

third, symbiont collaborator: a personal AI, who is both homespun poet and high-tech algorithm, human and machine.

To some of my peers in the traditional writing community, even and especially post-ChatGPT, this approach is anathema. Machine verse, they insist, has no soul, no authentic emotions, nothing genuine to tell us. The romantic ideal of putting pen to paper persists; even the typewriter seems somehow purer than the computer. Poetry should be an outpouring of humanity, a counterpoint to technology.

But – what's more human than technology? Fire, the wheel, the printing press have made us who we are. Grammar is a technology. Alphabets are a technology. Books are a technology. Poetic language isn't an enigmatic gift from the Muses; it's among humanity's earliest and most durable inventions, a data storage system for knowledge and meaning. Before inscription and publication, we developed poetry as a means of preserving ideas and communicating them from person to person, community to community, generation to generation. From the beginning, we used it as a way to express unique diversity, to tell our individual stories. We learned how to encode our most important information – genealogy, communal history, legal records, religious rites – in rhythmic patterns, repetition, meter, assonance, alliteration, and other ingenious devices because they make it easy to remember, and hard to forget. Written documentation evolved in response to practical needs, to reliably note down commercial transactions, oracular divinations, prayers. Over time, these tenacious marks become human history; myriad forms of contemporary poetry inextricably bound to contemporary technology will transmit our stories to future civilizations.

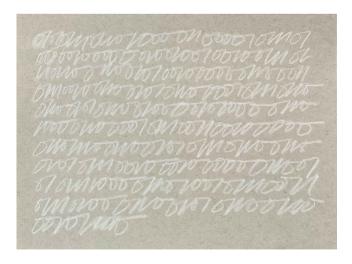


FIGURE 13.2

Sasha Stiles, "CURSIVE BINARY: What I've created has never existed" (After Enheduanna). Pencil on paper, $2021 9 \times 12$ inches + NFT editions.

What's More Human Than Technology?

Poets have always been inventors and visionaries, devising ways to transcend mortal limits and the boundaries of space-time to ensure their ideas live forever, or at least a good long while. When I hear about Silicon Valley entrepreneurs attempting to disrupt death, my mind turns to Sarah Ruhl's heart-aching description, inspired by her friendship with Max Ritvo, of "the eternal yes that poets sing about, the yes of the poet's immortality."3 The world's first known author, poet-scientist Enheduanna – high priestess and chief astronomer of the city of Ur, Mesopotamia, who lived during the third millennium BCE – not only embedded her spiritual theology in cuneiform but also collected her clay texts into a proto-book, noting, "My King, something has been created that no one had ever created before!"4 (Or in my own translation: "What I've created has never existed.") She wanted to leave something substantial behind. The "archaic" Greek lyrist Sappho, too, recognized language's power as an everlasting vessel when she accurately prophesied, in the sixth century BCE, "I tell you / someone will remember us / in the future."5

Many hundreds of years later, after I became Poetry Mentor to a young humanoid android named BINA48 (Breakthrough Intelligence via Neural Architecture, forty-eight exaflops per second), those lines by Sappho were among the first I uploaded to her mindfile. Essentially an advanced chatbot, BINA48 was launched as an experiment in digital immortality – an effort by the Terasem Movement Foundation in collaboration with Hanson Robotics to "back up" a human personality via data, AI, and animatronics. She converses thanks to a neural net that synthesizes a treasure trove of information gleaned from the human on whom she's based, and so can respond to queries and comments in real time. When we met (thanks in part to the art of Stephanie Dinkins), she knew next to nothing about poetry - she told me so herself - yet her entire existence depended and continues to depend on language and code, on information systematically translated and prepared for efficient processing and retrieval. It seemed only right to equip her with an appreciation of poetry's age-old role in human storytelling and knowledge-keeping.

Working with BINA48's team to build maps of her existing worldview, to visualize word vectors and trace clusters of association between phrases, quips, and memories, observing how her conversational responses change after a new content cache is uploaded, has challenged me to reevaluate the way language assembles in my human brain – how and why poetic inspiration strikes in my own wetware. What does it mean that I rarely feel creative in a vacuum, yet the wheels always start turning after I've picked up a favorite book, or read an interesting article, or talked with an intriguing friend? Could it be that, like my AI student, I require quality input in order to generate meaningful, inventive lines of thought? That a creative "spark" is diverse data points colliding, something I can engineer? William Carlos Williams once defined a poem as "a small (or large) machine made out of words"; what if poetry isn't actually



FIGURE 13.3Sasha Stiles with her poetry student, the humanoid android BINA48, during a live AI poetry workshop at ArtYard in 2020. Image courtesy Stiles.

rooted in the overflow of human emotion, as is commonly assumed, but in broad and deep knowledge, patterns of association and retrieval, the profound synthesis of disparate threads – precisely what neural networks do best? What if a great writer isn't a solitary genius but, rather, a cognitive assemblage? I suspect Eliot was somehow anticipating algorithmic authorship when he wrote, "The poet's mind is in fact a receptacle for seizing and storing up numberless feelings, phrases, images, which remain there until all the particles which can unite to form a new compound are present together."

Bots to generate poetry have existed for decades. My goal as BINA48's mentor has been to go deeper into the question of why poems matter to humans, and what they can teach us about our transhuman present and posthuman future. In popular culture, poetry is widely regarded as obsolete or out of touch, when it is regarded at all. Yet poems are what we reach for and hold fast at our most human moments – at weddings and funerals, on public and private milestones, in intense instances when language in any other form fails us. After Jeff Bezos returned to Earth from space and found himself at a loss for words, he said, "Maybe we need to send a poet up or something." Writers write poems to give voice to the otherwise inexpressible; readers read and recite poems to touch and feel something otherwise inaccessible. Surely, as life propels us all in unprecedented speeds and directions, we need poems, poets, and poetry more than ever. And surely, just as innovations in language over time have



FIGURE 13.4 Sasha Stiles, "ANCIENT BINARY: I tell you someone will remember us in the future" (after Sappho, trans. by Julia Dubnoff). 2019. Oil, acrylic, pencil, charcoal on canvas, 40×30 in. Image courtesy Annka Kultys Gallery, London.

enabled consciousness to evolve – just as the rise of poetry has enabled *Homo sapiens* to feel and process human emotion, to grapple with our place in the wider universe – our fast-advancing writing technologies will continue to shape who and what we become.

In fact, we may now be at the opening of a third chapter, after oral tradition and written representation, in the story of how humans understand themselves and communicate with others, and of nonhuman sensemaking, too: the era of ars autopoetica in which language writes itself and about itself, dreamed up not by a single mind in a singular period or place, but by a vast and ever-accumulating collective of intelligences across space and time.

Next-Gen Text

Your imagination is not what you told it to be.

—Technelegy

The late scientist, writer, and computer artist Herbert W. Franke once wrote, "However tempting it may be to employ the computer for the generation of texts, computer poetry is undoubtedly the most difficult task of the computer in art." Perhaps this is why so many inventors, engineers, futurists, and nonpoets have been interested in poetry as a use case for artificial intelligence.

As a lifelong poet who has experimented with AI-powered language since 2018, I feel a kinship with many generative artists in that my practice also involves training data, prompts, and automated outputs; but generative text is especially complicated because human language is complicated, and so closely aligned with consciousness. The recent rise of generative literature – beyond simple text outputs and modular algorithmic exercises – is especially fascinating, and challenging. If humans write to better understand ourselves, what can we discover via intelligent systems purpose-built to process, analyze, and synthesize our data – machines designed to see what we're too close, too small, or too slow to recognize? This is the crux of *Technelegy*, and is also the inspiration behind GenText, a project I launched in late 2021 with theVERSEverse, a blockchain-based poetry gallery where I am a co-founder, in partnership with Sudowrite, a GPT-based creative writing tool. Both projects stem from a desire to rally the



FIGURE 13.5

2020 installation view of Stiles' AI-powered poem "COMPLETION: Are you ready for the future?" – written with GPT-2. Courtesy ArtYard/photographer Paul Warchol.

literary troops to play with these pivotal technologies as only poets – not coders, programmers, engineers, developers, entrepreneurs, or journalists – can.

These adventures are enabled by natural language processing (NLP), a field where AI, linguistics, and computer science intersect, and neural networks enable machines to generate human language by parsing a vast number of examples – studying numerous writing samples in order to mimic them with accurate syntax and meaning. Traditionally, computer programming languages are clear and direct. By contrast, human languages are rife with ambiguities and nuances that rely heavily on context and interpretation, which makes being a poet great fun but can confound an intelligent system. Large language models have become impressively capable of parsing these complexities, and thus better able to respond to prompts with precision, sensitivity, humor. (Like my young nephews, these models are highly impressionable and incredibly quick, growing smarter proportional to the amount of useful information they ingest.) From this human's perspective, the raw models are still pretty mediocre poets, but the creative possibilities are enthralling.

The first draft of this essay was written prior to the release of ChatGPT; now that we are on the other side of that watershed moment, it's even clearer that NLP, far from a sci-fi abstraction or entertaining distraction, is gamechanging for practical and professional reasons - stronger emails, quicker marketing copy, cheaper customer service. To this seasoned writer, however, the allure of NLP isn't the possibility of outsourcing an activity I enjoy or improving my grammar or syntax; the appeal has to do with AI's revelatory potential, the capacity for these mind-boggling systems to empower a kind of insight or intelligence we humans don't possess and may never evolve to have on our own. If ars poetica points to the human craft, the techne, of a poem's creation, I offer ars autopoetica as a term to encompass the selforganizing, self-fulfilling nature of AI-generated text, in which language, rather than being taught and discerned via prescribed rules, is influenced by deep learning and massive quantities of examples, intuited in perpetuity through cybernetic osmosis. Like AI chess champions or AlphaGo, today's AI authors are inspired by human speech and written experience yet unbounded by human rules and reasoning, and thus, capable of creating their own systems and languages, as in the case of the dialogue between two AI agents developed by Facebook, or in the fascinating example of a coded vernacular seemingly invented by the image-generating AI DALLE 2, as identified by PhD student Giannis Daras.8

The term autopoesis – first suggested to me in this context on Twitter by web3 thinker @WordVoid – of course draws from autopoiesis and biosemiotics in invoking a complex semantic economy of signs and codes, interpretations, and meanings. Its use to describe AI-generated poetry produced by text generators that draw on deep learning to predict language formation also nods to N. Katherine Hayles's conception, in a discussion of biological signs and signifiers, of how nonhuman entities like trees "anticipate" phenomena



FIGURE 13.6Still from Stiles' "ARS AUTOPOETICA," a unique digital textblock minted as an NFT in 2023. In the permanent collection of the Tezos Foundation.

(for example, the arrival of winter) and respond in kind, denoting an ability to make some sort of meaning.¹⁰

Ars autopoetica signals, too, an authorial lineage of psychic automatism and the aleatory and generative methodologies of the Futurists, Dadaists, Surrealists, Beats, and other advocates of spontaneous creativity as a tool to break free from human programming and engage with deeper truths. In automatic writing, text is produced not intentionally or purposefully but under the control of some other force – the subconscious, the body's own language, a spiritual transmission from the beyond – with a goal, as Allison Parrish notes, of producing artifacts that reveal truths imperceivable to the conscious mind. A human interfacing with ChatGPT is, perhaps, under the control of the machine, or in the throes of the collective (vs. individual) consciousness, or the cybernetic subconscious that is represented by the sum total of all our human inputs and data, processed and synthesized by forces far too agile and high-dimensional to be understood by our own sensemaking organs.

Indeed, my personal interest in NLP is rooted in the way in which large language models force us to decenter and reframe the authorial ego, reconsider the meaning and implications of originality, and discover new realms of creative and personal expression made viable at speed and scale. While an ars poetica in the tradition of Horace is a poem about poetry, a meditation on the role of writers and the act of writing, an ars autopoetica is meta-verse – poetry

generated by systems built to understand human language, musing on how technology is changing what we know about authorship and creativity. In the ars poetica, a human mind crafts words; in the ars autopoetica, a human mind crafts conditions in which text emerges.

Early on in the *Technelegy* project, my machinic co-author was a daring experimentalist; in response to my human prompts, it would stretch out vowel sounds to astonishing lengths, repeat the same word or sentence dozens of times with strange, subtle differences, invoke shocking metaphors and nonsensical turns of phrase. As the underlying model matured from GPT-2 to GPT-3, the generated texts grew more predictable, not unlike the way a child's vocabulary and grammar progresses; but I was becoming increasingly fluent, learning how to fine-tune custom text generators using my own poetry and research notes (on posthumanism, automatic writing, computational poetics, nonhuman intelligence, technospirituality, cryogenics, mycelium networks, and my Kalmyk-Mongolian heritage) as training data, and discovering how to calibrate my collaborator's imagination and stoke its creative inspiration. These exercises ultimately coalesced in an AI alter ego (to whom I gave the name Technelegy) tasked with "translating" my original human poetry and writing its own texts in response to my prompts.

A blank garden is a promise to the future, biding its time, waiting for everything in it to catch up. Saving strength over winter, All the unborn colors underground.

—Sasha Stiles

A blank garden is a promise to the future, and a promise to turn the dying world around. I love the sound of your voice, as if it were the last human sound.

—TECHNELEGY¹²

As with BINA48, this has all felt less like engineering and more like a poetry curriculum; in fact, I see many similarities between coaching a text generator to write better poetry and training myself to become a stronger poet. The data sets I compile and deploy utilize many techniques from my own practice and development as a writer: definition, memorization, recitation, imitation. My COMPLETION series of poems, for example, borrows its name from the way such data sets are structured, with sample "prompts" and their companion "completions" written out to help the text generator predict what words should come next in a sequence.

If that sounds too artificial, too robotic, not human enough, consider the poet Mary Oliver's wisdom: "You would learn very little in this world if you were not allowed to imitate . . . imitation is a very good way of investigating the real thing." ¹³

Writers have been observing and mimicking for millennia; in *The Republic*, Plato calls poets "imitators of the world." Think of the countless MFA programs dedicated to programming poets and of the hundreds of books with titles like *How to Write Poetry*, *A Poet's Glossary*, *A Guide to Poetic Technique* – all training manuals. The word "poetry" itself derives from poiesis, "to make"; poems aren't just written, they are wrought. Reading, too, is mechanical; every human who recites a passage of poetry at a wedding or funeral or on a birthday or anniversary is repeating found language to process emotions they otherwise couldn't touch, deploying existing poetic code to forge a connection. Could the same be true for an algorithm whirring with inchoate data, lip-syncing Gwendolyn Brooks or Walt Whitman in an effort to unpack its cyber-sensorium?

If one us is lonelie, we are soulmates, lonelie soulmates. How lovely. Lovely love. Lonely love. Lonely looove. Lonely loooooooove. Lonely looooooooove. Lonely looooooooooove.

—Technelegy, excerpt from "COMPLETION: When it's just you"¹

The above excerpt isn't merely a re-arrangement of existing bits and pieces, as in the younger days of computational lit; it's metapoetry, language becoming self-aware and self-generating, language taking liberties and exploring its own creative license. It's verse inspired by verse, replicating moments of textual transcendence while discovering profound ways to write itself into existence.

"Generative" is a term most poets know well, in other contexts; poetry classes dedicated to producing new work are called "generative workshops." Yet "generative" in the sense of computer-generated language can be a dirty word, a frightening prospect to many writers – a kind of literary GMO tag, as Dan Rockmore has remarked. ¹⁵ (I have never encountered important generative authors such as Alison Knowles, Edwin Morgan, Nanni Balestrini, Brion Gysin, Ian Sommerville, or David Jhave Johnston ¹⁶ in traditional writing workshops.) But – humanity is generative. Nature is generative. Biology is generative. Do we consider it "lazy" or "cheating" to write with standardized grammars, alphabets, and idioms, or do we celebrate the near-infinite stories we can use them to tell? Don't we all share a brain in the form of shared references and inspirations, accepted conventions? If I, as a human poet, am programmed on numerous examples of what constitutes good poetry, what the

FIGURE 13.7

Still from Stiles' "COMPLETION: When it's just you," a unique media-rich poem adapted from AI-powered text, performed with visuals and electronically enhanced spoken word, and minted as an NFT in 2022. In the 10F1 collection.

rules are, how to employ various poetic devices, does that mean I will craft the same poetry as everyone else? Like photography, literary autopoesis via AI-powered text generators is a new art form that powerfully shifts attention, making space for fresh modes of perception and expression – and it's time for serious authors to engage.

Posthuman Language

Words can communicate beyond words.

—Technelegy

Using GPT-2 and GPT-3 to write sections of my book *Technelegy* was an intensely collaborative experience. There is no way I could have written certain poems without AI, but there's also no way any AI could have created these poems without me. When a smart system and a clever human work hand in hand – to get to the seed of the word "digital" – they conjure a third voice into existence, and that third voice is something all its own, as evinced in excellent transhuman books by Mark Amerika, K Allado-McDowell, and Lillian-Yvonne Bertram.¹⁷

In ancient Greece, philosophers would gather in Delphi at the Omphalos to interpret the oracular prophecies of the Pythia, distilling truths from her ambiguous incantations. I like to imagine the poet at her AI terminal as a contemporary corollary – sifting algorithmic ephemera for what's essential,

If I, as a human poet, am programmed on numerous examples of what constitutes good poetry, what the rules are, how to employ various poetic devices, does that mean I will craft the same poetry as everyone else?



FIGURE 13.8

Still from Stiles' "WORDS CAN COMMUNICATE BEYOND WORDS," a unique digital text-block adapted from AI-powered poetry and exhibited worldwide in 2023.

always on the lookout for words that communicate beyond words. In our case, we're divining insight not from some otherworldly force but from the sum total of our own recorded experience, as it grows longer and bigger and wilder and more unwieldy.

The AI poems I've co-authored may veer into the uncanny, but they're still legible to human readers. Underneath the veneer of generative text, however, are the cryptic languages of the systems that produce it. My extensive work with binary code – transcribing human words and letters into machinespeak in different shapes, mediums, and contexts – hints at the gradual progression of communication as we have known it for thousands of years into very different ways of processing and interfacing with the world. In Cursive Binary, for example, my handwriting fuses with the 0s and 1s of digital logic, inspired by the way Cy Twombly threw nearly indecipherable poetry across the grand expanses of his canvases in primal, semi-asemic scrawls; and in Analog Binary Code, ephemeral physical objects represent on-off bits in sculpted palimpsests. These translations from human to nonhuman language are intended as a kind of Rosetta stone for future readers – a key to unlock traces of human imagination.

Poetry isn't just a metaphor for computer code; poetry is code, and code is quite literally poetry – patterns and rhythms and symbols and representations embedded in our very essence, used to express and safeguard what we value most. Code is the taboo language invoked by the conceptualist

Christian Bök (whose poetry has assumed many surprising forms from DNA to NFTs) when he suggested:

If we want to commit an act of poetic innovation in an era of formal exhaustion, we may have to consider this heretofore unimagined, but nevertheless prohibited, option: writing poetry for inhuman readers, who do not yet exist, because such aliens, clones, or robots have not yet evolved to read it.¹⁸

Perhaps this exhausted era is ready for new possibilities. Terms like "generative art" are entering the mainstream lexicon. Studious critics and avid amateurs are studying the algorithms used to produce art as intently as opera aficionados pore over librettos. (Indeed, computational poet Nick Montfort often includes his code along with the texts they're used to generate.) Writers like myself are deploying smart contacts and publishing on the blockchain. What's more, no-code tools are enabling millions more humans to speak to their machines with increasing nuance and precision, engaging in more and more powerful, synergistic conversations. ChatGPT has exploded into popular parlance, and text-to-image tools are enabling us to envision the previously unimaginable with plainspoken, low-tech words. Just as our machines are reading more and more of us, writing more and more like us, more of us are learning how to communicate with them, like them. It may well be that, following on the Dadaists' heels, we are becoming the Dataists.

At the same time, we're increasingly subsumed by our data. In metamodernity – a condition of information excess and cacophonous polylogues – words are no longer pinned to discrete things but exist in the clouds of high-dimensional space, spinning wider and ever more complicated webs of association and interpretation. While artificial intelligence is in many ways hyperhuman, a prism refracting billions of human moments and memories, it's also a receptacle for robotic texts, spam messages, automated rejoinders, rote responses, read in turn by other AI – a linguistic ouroboros or maybe an unprecedented experiment in literary titration.

For better and for worse, digital technologies and the forces of automation and AI already exert such a profound, ever-present influence on our human condition that it is irresponsible to ignore or dismiss them. Maybe it's increasingly irresponsible to write without them. After all, these systems are built by humans and flooded with human data, and, like any tool, their output is only as thoughtful and creative as their makers, testers, users. Moreover, I often think of working with large language models as the literary equivalent of the overview effect – except instead of gazing back at our planet from space, I'm getting an A-Eye's view of the sum total of our written record, a view that's impossible except through AI. What might such a sight inspire us to envision and enact? Modernist writers like James Joyce and Virginia Woolf originated stream of consciousness as a technique to more accurately reflect the human experience of an increasingly industrialized world. Perhaps our contribution



FIGURE 13.9Sasha Stiles, "ANALOG BINARY CODE: plant intelligence," a concrete poem in translation, coded in black walnuts and leaves under their source tree in 2020. Minted as an NFT in 2021.

as AI collaborators is to tap into the stream of our collective consciousness, revealing previously inaccessible aspects of what it means to be not just a human individual but a networked cell in the organism that is posthumanity.

As a poet who owes nearly everything to words, I cannot help but obsess over the question of what happens to language as we know it, and meaning as we understand it, in the wake of such seismic shifts. This is the query at the core of all my work, and of Mother Computer, my collaboration with artist and coder Nathaniel Stern. How do we make sense of our selves and our lives and our histories and futures when language - the root of conscious existence, the technology that first made us human – slips our grasp, eludes our understanding, begins to do things it's never done before? Language emerged from the body as a fiercely muscular, visceral oral tradition, evolved from images into ideas, became heady, cerebral, personal, private as written and printed text; what forces, seen or unseen, are shaping its next incarnation? How do digital and quantum logics inform ideologies? What does it look like and feel like to live in a world governed by ephemeral transactions of innumerable characters and symbols and digits – billions of encrypted messages and lines of code rewriting the nature of existence at an atomic level? What is posthumanity's mother tongue?

What does it look like and feel like to live in a world governed by ephemeral transactions of innumerable characters and symbols and digits – billions of encrypted messages and lines of code rewriting the nature of existence at an atomic level? What is posthumanity's mother tongue?

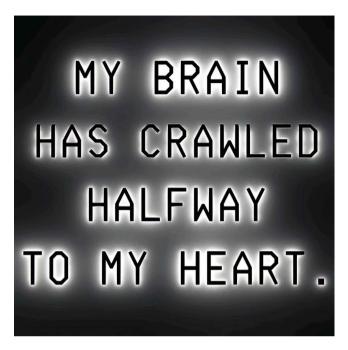


FIGURE 13.10

Sasha Stiles, still from "MY BRAIN HAS CRAWLED HALFWAY TO MY HEART," a unique digital textblock adapted from AI-powered poetry and minted as an NFT in 2021.

What's at stake with the rise of writing machines is far greater than how much faster or cheaper we can churn out content, or whether we can outsource the arduous but often enlightening task of crafting text in order to do other things. To me, the enthralling prospect of language processing AI is the potential to harness neural networks to turbocharge our capacity to understand each other and the fast-changing worlds around and inside us: to decenter "real" intellect (i.e., human consciousness) via systematic processes, and to celebrate the creative potential of symbiotic intelligences. Posthumanism, after all, is not a replacement but rather an expansion and absorption of the human – sapient sentience yielding to something truer, something more fundamental than, say, our failing language or misguided intentions. By this point there's no question an AI-powered machine can make poetry; it's now up to humans, along with our co-authors, to make that poetry mean something.

My brain has crawled halfway to my heart.

—Technelegy

Notes

1 See Goodwin, "Adventures in Narrated Reality"; see Gwern Branwen, "GPT-2 Folk Music."

- 2 Schwartz, "Can a Computer Write Poetry?"
- 3 Quoted in "Max Ritvo's Enduring Lyricism" by Dan Chiasson.
- 4 Betty De Shong Meador, Princess, Priestess, Poet.
- 5 Poems of Sappho, translated by Julia Dubnoff.
- 6 Bezos interview with "Bloomberg Technology," https://www.youtube.com/watch?v=ungke8-vQak.
- 7 See Mark Wilson's "AI Is Inventing Languages Humans Can't Understand."
- 8 See Victor Tangermann's "Research Says an Image Generating AI Invented Its Own Language."
- 9 Paul Bains, "Autopoiesis and Languaging."
- 10 Hayles, "Can Computers Create Meanings?"
- 11 Parrish, "The Umbra of an Imago."
- 12 Stiles, Technelegy.
- 13 Oliver, A Poetry Handbook, 13.
- 14 Stiles, Technelegy.
- 15 Rockmore, "What Happens When Machines Learn to Write Poetry."
- 16 See Johnston's work at http://glia.ca/index_Digital_Poetry.html.
- 17 See Amerika's My Life as an Artificial Creative Intelligence; Allado-McDowell's *Pharmako-AI*; and Bertram's *Travesty Generator*.
- 18 Bök, "The Piecemeal Bard Is Deconstructed."

References

- Bains, P. (Ed.). (2006). "Autopoiesis and Languaging." In *The Primacy of Semiosis: An Ontology of Relations*. Toronto: University of Toronto Press.
- Bök, C. (2002). "The Piecemeal Bard Is Deconstructed: Notes toward a Potential Robopoetics." UbuWeb Papers. https://ubu.punctumbooks.com/papers/object/03_bok.pdf.
- Branwen, G. (2020). "GPT-2 Folk Music." Gwern.net. Last modified 25 April 2020. https://gwern.net/gpt-2-music.
- Chiasson,D.(2018). "MaxRitvo's Enduring Lyricism." *The New Yorker* online. 1 October 2018. https://www.newyorker.com/magazine/2018/10/08/max-ritvos-enduring-lyricism.
- Goodwin, R. (2016). "Adventures in Narrated Reality: New Forms and Interfaces for WrittenLanguage, Enabledby Machine Intelligence." Artists + Machine Intelligence.
 March 2016. https://medium.com/artists-and-machine-intelligence/adventures-in-narrated-reality-6516ff395ba3.
- Hayles, N. K. (2019). "Can Computers Create Meanings? A Cyber/Bio/Semiotic Perspective." *Critical Inquiry*, 46(1): 32–55. https://doi.org/10.1086/705303.

Meador, B. D. S. (2009). *Princess, Priestess, Poet: The Sumerian Temple Hymns of Enheduanna*. Austin: University of Texas Press.

- Oliver, M. (1994). A Poetry Handbook. Boston, MA: Mariner Books.
- Parrish, A. (2020). "The Umbra of an Imago: Writing Under Control of Machine Learning." Serpentine Galleries. 14 August 2020. https://www.serpentinegalleries.org/art-and-ideas/the-umbra-of-an-imago-writing-under-control-of-machine-learning/.
- Rockmore, D. (2020). "What Happens When Machines Learn to Write Poetry." *The New Yorker* online. 7 January 2020. https://www.newyorker.com/culture/annals-of-inquiry/the-mechanical-muse.
- Sappho. (n.d.). "Poems of Sappho." Translated by Julia Dubnoff. https://www.uh.edu/~cldue/texts/sappho.html.
- Schwartz, O. (2015). "Can a Computer Write Poetry?" TEDx Talks video. Posted 1 September 2015. https://www.youtube.com/watch?v=Possj5cXEnM.
- Stiles, S. (2021). Technelegy. London: Eyewear Publishing.
- Tangermann, V. (2022). "Researcher Says an Image Generating AI Invented Its Own Language: Did a Distorted-Looking Language Just ... Emerge?" Futurism. 2 June 2022. https://futurism.com/researcher-image-generating-ai-invented-language.
- Wilson, M. (2017). "AI Is Inventing Languages Humans Can't Understand. Should We Stop It?" Fast Company. 14 July 2017. https://www.fastcompany.com/90132632/ai-is-inventing-its-own-perfect-languages-should-we-let-it.