ISSN NO : 1071 - 4391

The MIT Press

vol 14 issue 05

Writing the Virtual: Eleven Dimensions of E-Poetry

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Writing the Virtual: Eleven Dimensions of E-Poetry

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Keywords
digital poetry, new media poetry, literary hypermedia, electronic poetry, electronic literature, Web poem, poetics, reading, virtual, writing

Abstract
Eleven characteristics of networked digital poetry, a category that encompasses an enormous variety of work, are discussed and illustrated with examples. Issues raised include the recalibration of the writing/reading relationship, the nature of attachment at the site of interaction, an architectonic quality of instrument-building that characterizes many pieces, differing treatments of time and "place", the use of recombinant flux, a performative character displayed by many works, the omnipresence of both translation and looping, as well as pervasive references to ruin and hybrid states of mixed reality.

Introduction

Writing native to the electronic environment is under continual construction (poiesis) by its creators and receivers. The neologism poietics engages this dynamism. Poietic e-writing is characterized by the following 11, entangled, states:

1. Writing and receiving functions are carried out by communicative peers;

2. Intense attachment exists at the site of interaction;

3. Time, become active, stratigraphic, and topologic, is written multiply;

4. An architectonic writing builds "instruments," to be "played";

5. Though reception replaces interpretation, searching and questing persist in a seductive environment of archaeologic ruin and erosion;

6. Recombinant flux is produced by writing engines and generators;

7. Writing and receiving are real-time performative events with some resemblance to improv and to traditional oral performance, which depend on ergodic contributions from their reception-communities;

8. Translation as conversion and transcoding, as well as translation of intention into code, are the basis of e-writing; translation toward a potentially cross-border communication is sometimes its aim;

9. A bodily-inflected "place" remediates the current GPS coordinates of refugee, diasporic, or otherwise multiply-located readers;

10. Various sorts of looping, simple, event-prompted, and recursive, are fundamental to e-writing;

11. Soft ephemeral space in any number of dimensions is created and disassembled or dispersed inside an overall default situation of hybrid states of mixed reality.

Entangled states of e-poetry are inflected by the “dual patterning” of human language: a layer of sounds and a layer of words, heard together but not the same. Sounds are few, 40 to 50 phonemes, but they combine to produce an almost infinite number of words. Double patterning works for writing as well, written words without end from a handful of letters.

When we focus on the alphabet-like, we are using a recombinant unit. Such a procedure lies at the heart of electronic computation and genetic bio-information. When we focus on the sound stream, or on gesture, we are using continuity. Speech sounds are not just distinct phonemes — speech consists of overlapping flows, like dancing. As you take one step, you are already preparing for the next. Poietic hypermedia juggle the alphabetic digital and the gestural continuous, keeping them both in motion.

Lacking any definition or criteria for a “hypermedia” unit or for a “hypermedia” whole, ordinary forms of criticism are stymied. What applies generally to the entangled states is a character of instability, of dynamic complexity, of ever-changing composition. E-poetry runs directly into the unrepeatable, through algorithmic reach and through live feeds from dispersed networks. This situation is interesting, valuable, and riveting — as well as exhausting, confusing, and opaque.

One: Communicative Peers

Writing and reading relations and behaviors are changed: “writing” has addressed itself to producing behavior (executable code), and “reading” has evolved to receive and participate in dynamic hypermedia. A practice of viewing, sampling, playing, participating, decoding, and receiving among communicative peers is being developed. These peers are not equally powerful. Earlier rhetoric about literary hypertext inappropriately suggested an equivalence or interchangeability of reader and writer. It is rather the case that at least three agents (writer-coder, machine processor-network, player-reader) hold veto power over communication. Unless all are engaged, nothing is happening.

A poietic representation of the key three agents is featured in Bradford Paley’s CodeProfiles [1], his contribution to the CODeDOC show at the Whitney. It reads — and displays itself reading — its own code. An amber point traces a human (linear) read-through; a silver, developmental order, how Paley broke it up as he composed it; and a green, the rhythm of machine reading, how the routines call each other, passing control back and forth. Color-coded paths march, figure-skate, and vibrate over sensitive spots, creating beautiful overlaid trails, a pattern that can be supplemented by the viewer’s own mouseover reading of the code.

CodeProfiles profiles itself, presenting a sketch (profile), and “profiling” a suspect. What is suspect, here, is the impression of revelation. For every bit of revealed code, there exist further layers, levels, and protocols of unrevealed code which cannot be seen while it is running. Another contributor to the CODeDOC show, in a renga-like move, responded to CodeProfiles with a remix that profiled Paley’s program profiling itself, focusing on the parallel operations occurring at any moment, rather than the sequential order Paley had traced.

An equally active, but much more unmoored, reception context is explored by Giselle Beiguelman in Poetrica [2]. In a world where the border between art and communication is blurred by textual image, visual text, and motion graphics; where reception occurs on a large variety of devices, including PDAs, DVDs, movie trailers, cell phones, electronic panels, the Web, plotters, and digital prints, Beiguelman wants to sever the ties between verbal and visual that concrete poetry presupposed and created. To this end she composed, by algebraic operations, a series of visual Nomadic Poems (no-poems) with non-alphabetic fonts. She wants to drive home the radical disconnect between “the same information” and the material support on which it is displayed, emphasizing unlinking information from its place of production and transmission, releasing it into logical space.

The unlinking she emphasizes is brought about equally by the fact that separate representational and inscription media are sucked up together into one computer “metamedium [3].” Filters and effects (reverb, blur, etc.) are applied independently of any physical situation in which they might originate. These cross-applications, no less than output to a variety of supports, are responsible for the nomadic immaterial quality of the digital interface that Beiguelman seeks to convey.

However, in Poetrica, concurrent with breaking one set of connections, Beiguelman has simultaneously arranged for another set to arise through tele-intervention by the

public. For the Poetrica project, anyone could compose visual messages (up to 52 characters) and send them, by Web or SMS, to three commercial electronic billboards in downtown São Paulo. Poetrica demonstrates that reception context governs, that the interconnection of network-reader-reception device is independent of and replaces the verbal-visual connection emphasized in concrete poetry, emblems, and icons. As she says of nomadic literature: "...being hybrid and unlinked to support, it dematerializes the medium, and the interface construes itself as the message [4]." Works like CodeProfiles show that the amount left "unrevealed" at the interface remains enormous.

An amusing and somewhat bereft commentary on the exploitation of social codes that becomes possible in this context, a simulated classic e-mail scam, is the Young-Hae Chang and Marc Vogt piece, Subject: Hello [5].

Two: Intense Attachment

E-media can become magically addictive, its loss accompanied by withdrawal symptoms. An Empyre list participant [6] says: "I've spent countless nights in front of my three machines, lost in what I'm doing, and the next day, I can't remember whether the conversations I had were in person, on the phone, or in real life. And then you look at the harder-core game-players; they are so easily lost 'in the zone', a definitely meditative experience, where even the game becomes transparent and you run entirely on subconsious reflex."

Gregory Ulmer in print [7] has theorized this intense attachment to e-media as "conductance" of desire best formed through the creation of "my-stories." Talan Memmott extends the investigation in a suite of six poietic hypermedia works [8]. He contends [9] that it is only within the rich semiotic potentials of hypermedia work that his and Ulmer's ideas find their true habitat. Accounting for them in print has an awkward, reverse-engineered feel.

Lexia to Perplexia [10], the best-known of Memmott's pieces, is specifically concerned with network attachment, worlds on either side of the Alice-looking-glass screen involving each other in a not quite Narcissan way. Importantly, the "arguments" of the piece are lodged in its interfacial affordances, as much as in any of its text, its surface design, or its choreography, thereby demanding "attachment" from the reader.

Regina Célia Pinto's Viewing Axolotls [11] takes a more dramatic approach to attachment. It is based on Julio Cortazar's story, Axolotl, which tells of a man so hypnotized by the golden, neotenic, amphibious creatures in an aquarium that one day he finds himself inside the tank, gazing out at the man who comes to gaze at him.

In Viewing Axolotls, Pinto provides many opportunities for the reader to engage simultaneously with her constructs and their meaning: with virtuality, with "the eye" and "the I," with the desire for participation in the life of an alien being. Readers can read the Cortazar story (in English and Portuguese translation), view the now-female avatar protagonist enter the aquarium, or play a textual game in which the object is to properly manifest the words "view," "fog," and "understanding." Other segments of the piece include a manipulable ax-box virtual-reality interface, a virtual-real chimeric Escher lizard, a sand woman wishing to bi-locate, and an opportunity to construct an animation onsite. Avatar, player, reader, and axolotl are all found to form behind the glass of the computer screen on a grid of electronic co-ordinates.

Intense public intimacy, carried out via PDAs, cell phones, and the Web, is a social context for the poietic. Not only does the network locate us "in-between" the worlds of viewer and viewed, mesmerized and mesmerizer, it also affects our experience of time.

Three: Time

Online sociality pushes toward "in-between times" reading engaged during a work break or on the move. The user's "no-time" in the gravitational world translates to multiple interstitial times in the e-world. Many small fast works exist to serve these fleeting times. But equally, online poeietic work may be very slow, a web-cam watching weather, a slowly developing set of algorithmic mutations, or the transliterating process in a John Cayley poem. Cayley describes his work-in-progress, Overboard [12], as "an example of literal art in digital media that demonstrates an 'ambient' time-based poetics. There is a stable text underlying its continuously changing display and this text may occasionally rise to the surface of normal legibility in its entirety. However, Overboard is installed as a dynamic linguistic 'wall-hanging,' an ever-moving 'language painting.'"

Whether works are as slow as paintings, or as fast as Brian Kim Stefans' setting of Creeley's poem I Know a Man, letter by letter [13], they have no inherent time. As Adrian Miles points out [14], with regard to interactive video as an e-poietic form, one video clip can last two seconds or 20 minutes, each track separately scriptable as to speed, direction of play, mobility, or presence. The non-indexical character of time online is a very strong difference in digital aesthetics from the aesthetics of print or photography.

The times involved in any poietic production include machine speed, time for the code to read itself, real time, clock time, coded speed, network lags, device delays, and overlaid simultaneous rhythms of unfolding. The co-presence of neighboring moments opens to a kind of shift that is neither simple oscillation nor simple progression. Even as there is no canonical hypermedia unit, there is no privileged "time" unit or moment.

In V: Vniverse [15], an e- poem I made with Cynthia Lawson, time-tuning is directed toward bringing internal timings of the piece into resonance with each other and with machine-time, network-time, and the timings of perception-cognition. V: Vniverse is a part of a larger work V, distributed across an invertible print volume [16] and two online locations[17]. V analogizes nomadic peoples of the Ice Age to nomadic peoples of the Information Age. As Ice Age nomads lived on a grid of stars, patterns they invented to be clock, calendar, and map, the Vniverse Web reader, facing a "night sky," must inaugurate time by sweeping her hand, causing fleeting images to appear —diagrams and outlines that disappear back into the darkness.

Lingering on a star, single-clicking, or double-clicking provoke different text behaviors, creating spatial micro-textures and cadences unavailable in "the same" print. Reading assembled texts proceeds in tandem with scanning disappearing tercets. Clicking 'next' activates many time-scales at once: the time of break-up, the time of emergence, and the time of cross-layer existence between dissolving and emerging texts co-exist with the time of reading forward in the same constellation. The iterative play-read process overwhelms individual differences in sampling, just as years of Ice Age sky observation yielded recognizable repetitions or significant conjunctions. Extinction, as much as production, is to be read.

This highly recursive Director piece never leaves its original frame which helps give the illusion of words moving directly in and out of the sky. All of the time resources go toward responsiveness and the production of language, rather than visual display. The stars await — each a standpoint and a center — and they are more active than the constellations, though the visual impression is the reverse. Here space is used to amplify the sense of resonance that internal timings create.

Four: Instruments

John Cayley was one of the first to refer to poietic systems as similar to musical instruments. Cayley also analogizes e-writing to the child's Mystic Writing Pad evoked by Freud [18]: "If you program your system and its screen to behave like a Mystic Writing-Pad, then your writing and your atoms of writing become time-based.... Just as we have to watch the whole process of writing and erasing in order to appreciate the Mystic Pad...we must read the entire duration of a literal [letter-producing] automaton, observing...the particular way in which it is written; the particular manner, means, and duration of its persistence; and the particular mode of its destruction."

Cayley's riverIsland is just such a Writing-Pad and poietic instrument. Two loops, figured onscreen as river location strips, are Quicktime movies that can be dragged by the mouse. The horizontal river moves along a loop of poems from an ancient Chinese sequence, while the vertical river scene moves through 16 variant translations of one of the poems, including phonetic sounding of the Chinese, and a shift from literal to graphic representation, as the word "kong" (empty) morphs through Xu Bing's square writing to an actual Chinese character.

A navigation device at screen right allows one to move point by point along the loops. This point by point moving involves the performance of a kind of translation Cayley calls transliteration; that is, the source text and the target translated text are set up as two arrays with rules for shifting each source letter to its target letter that involve the letter's sound and its speed of arrival. An entire continuum is evoked which moves in and out of comprehensibility, but never out of legibility. What is overlaid on this motion of translation is a set of voices reading the poem in many languages and the sound of water from the implied and visualized river.

In Cayley's riverIsland [19], the interface does not construe itself as message, but as a sensitive control, a set of lute-like strings to pluck. The poietic poet builds an

instrument to hear the tune in his head, as Theremin did the Theremin, Ives the Humanophone, Partch the Cloud-Chamber bowls, or Raymond Scott the Electronium, designed, he said, “for the instantaneous composition-performance of music heard only once, then left to echo in its solitary orbit [20].”

Other notable e-poietic instruments include Diana Reed Slattery’s Glide [21] and LiveGlide [22], Jim Andrews’s Nio [23], and Jim Rosenberg’s Diagram Poems [24], where grammar itself is put into play as an instrument.

Five: Ruin

Poietic objects are in general not exhaustible through any kind of closure, and thus are not subject to definitive interpretation. However questing and searching, being seduced and led on, being intrigued and in search of emergent understanding, are part of interacting with them. Ragnhild Tronstad [25] has analyzed the reading/behavior of those who play quest adventure games in a Mud. Players do not feel they have exhausted a text space simply because they understand how it leads to a “solution.” It is independently important to them to acquire combat points, quest points, and “explore” points. Quests are driven as much by evasion of closure, as by its accomplishment, as in any seduction. One might even say that quests want to be continued more than they want to be stopped, that the fear of collapse into final meaning is what drives them onward.

Archaelogic ruin leads to the pursuit of seductive clues and private inferences, as in Ulmer’s heuretics. Sites are probed and mined with especial attention to gateways between layers and alertness to era as manifested by technical standards.

Christina McPhee [26] limns a vision of the electronic universe as a ruined aphasic brain: “The fugue-like recursions of speech in persons who suffer stroke or trauma signal the condition of aphasia, characterized by perseverance, that is, the sufferer perseveres in repeating loops of sound and syntax....” She probes the intersection of cyborg and aphasic perseverance.

Epitaphic poietic works abound online. Migrating Memories [27] gives us 47 accounts of refugees re-located to Northern Europe who were able to bring one remnant, or shard, from the ruins of their prior lives. Mark Napier’s King Kong [28] has proven to be the single most affecting 9/11 memorial piece for my students. Though the title says King Kong, and its appearance suggests the standing Empire State Building, the overwhelming ease of tearing down this springy wireframe form, over and over, against a red background that turns increasingly smudged and smoky gray-black with tracks of its fall, registers as appalling in the 9/11 context.

Donna Leishman’s Deviant: The Possession of Christian Shaw [29] deals in yet a different way with life amid the ruins of history and meaning. Her prior projects, Red Riding Hood and Bloody Chamber (Bluebeard), reconfigure the female protagonist against the foil of known fairytale narratives. Deviant, by contrast, alludes to an historical narrative unknown to nearly all, and one goal of the reading is to discover what you do not know exists, to sense yourself as a lone — and lonely — explorer having much in common with the young girl Christian.

Christian is trapped by Leishman in a “dormant” structure: “one prescribed landscape in which things click on, grow, retract...a series of...frozen moments in which narrative events can be drawn out by coaxing interactions... [30].” The moves which will advance through the piece’s linear structure are all hidden, and there is no turning back once you have moved from one tableau to the next. This rigid structure looks part Reformation Scotland and part 21st-century techno-zone designed down to the pixel level. Visual reference is made to teenage Goth, sci-fi, and popular culture.

Leishman claims that her “project is intentionally frustrating, reflecting the notion that events are...trapped in historical texts.” Christian Shaw is entrapped in such a text as a “demonically possessed” 11-year-old who implicated six adults as witches, all subsequently burned in 1697. Not only are the 17th- and 21st-century interpretations of this child strongly divergent, but the account itself, as recently discovered via feminist research, is anonymous, possibly influenced by Salem witch trial narratives from 1692. The persistent or lucky reader eventually arrives at a page which tells this story and links to traces of Christian’s legacy today. The spare, unattractive document, so full of explanatory force — in overly many directions — lives at odds with the visual richness of Christian’s portrayal. The sense of wrong or threat that pervades the site ultimately trickles down, in Leishman’s view, from the deceptive anonymity of the tale, or as she says: “The founding text supremely tainted how generations perceived Christian.”

Leishman's goal is to prompt re-readings. For her, "conclusion" consists of performing a set of re-readings with no clear payoff. Repetition, linearity, and a feeling of being trapped in history are both the state of the female subject and the architecture of this particular project. Within Deviant, the participant cannot alter the narrative sequence, even though there is a high level of interaction with the environment. Any compulsion to exhaust the coded world (win the game, or finish the story) is rebuffed. We instead collect the equivalent of game-quest points, exploring a devious/deviant world, pixel by pixel, petal by petal.

Six: Recombinant Flux

By contrast, the impulse to exhaust all occasions, or at least to capture them at the level of the algorithm, makes itself known in works of recombinant flux. A, by now mainstream, cultural impulse to dismember and remix is clear in all works inflected by DJ or VJ or genome-project techniques. In literary hypermedia this impulse produces highly distinct poietic objects.

An effect of perpetual prolongation is seen in Florian Cramer's Here Comes Everybody: A Continuarration of/on Finnegans Wake [31]. Blocks of text from the Wake are presented to the reader who clicks on a syllable. The program extracts all sentences containing that syllable from the entire text of the Wake, breaks those sentences into syllables, and then recombines them based on the likelihood of one syllable following another, thus generating new sentences and new portmanteau words for the Continuarrated Wake. New creations are fed back into the text database and the process continues.

Neil Hennessy's Jabber Engine [32] starts with the alphabet, not with syllables from a precursor text, but aims similarly to create unknown but sonically plausible portmanteau words. Rather than basing itself on literary history, it analogizes itself to chemical bonding. The "chemical" rules, in this case, are highly linguistic, based on probabilistic "laws of good combination" for letters in English derived from inspection of the present English lexicon. Jabber and the Continuarration produce words that "sound right" but are not meant to convey familiar meaning. They might be said to be enriching the language with plausible words to create or be used in an unknown future.

By contrast, Jim Andrews and Pauline Masurel's Blue Hyacinth [33] text does engage understandable meaning. Masurel uses Andrews's stir fry mechanism to transform four short vignettes, each always available to the reader in its own shade of blue. The texts have been cut into 30 "combinable" bits, phrases to sentences, and can combine in 430 (1,152,921,504,606,846,976) ways as you mouse over the twelve or so lines displayed, creating a blue-rag rug of a text, semantically clear, syntactically fluid. The substitutions occur shiveringly fast, and one is torn between several of Janez Strehovec's reading strategies [see Section Ten of this paper].

Another recombinant literary system focused on message is Geniwate's visually sophisticated Concatenation [34]. It addresses the situation of detention camps run by the Australian government. She cites the Oulipo and Burroughs's cut-up strategy as influencing her, but adds: "Of course, it's not as random as a cut-up; there are heaps of rules determining what gets generated. I'm not so much interested in the surreal aspect of the cut-up principle, but in the performative aspect."

"Authoring" has either moved from the text to the system or been enlarged so as to include a fluctuating system of re-combinant generation and presentation. The effect of reading such poietic objects is neither that of encountering a single unvarying (print) instance, nor of encountering the infinite potential and philosophical resonance of a rule: "draw a line and follow it." Rather, the range of emerging events is large, limited, and fluctuating. Fluctuation arises because electronic works are part of a dynamic network. In this, they resemble art on the walls of caves, where what you can see, or not, of such art fluctuates hourly according to temperature, humidity, the flickering of your lamp, and your motion as you approach and move around it. Thus, in both parietal and electronic art, there is a shift from sender-intended to whatever comes out after ambient noise is included. There is a shift toward an engaging real-time performance of communication.

Seven: Performative Events

Poetry that performs in order to mirror, address, or engage the world means performance characterized by complexity, emergence, genetic algorithms, and neural networks. Randomness and noise are understood to have a productive role.

Many Flash, Shockwave, Java, and Processing works look as if they are based on a

complexity paradigm, as Manovich [35] argues. The algorithms behind such works are often taken directly from the scientific literature on complexity or cellular automata. An example is the Doublecell [36] site which describes itself as “an online enclosure of responsive ecologies” with a focus on “dyads…diptychs…symbionts, palindromes, mirror-images…predator-prey, and parent-child systems.” Singlecell, precursor to Doublecell, is a “bestiary of online life-forms reared by a diverse group of computation artists and designers.” An important poietic connection between art and science exists in this practice. Though these Cell sites use text rarely, there is no reason why they should not. In particular the gateway interface for Doublecell, Jared Schiffman’s Honey, begs for image-text elaboration. The motivation for its design was “to create a new kind of primitive shape [… that would be] unlike a static circle, square, [or] triangle; [a] shape [that] could be aware of its neighbors and respond to its environment.” For an electronic poet, the idea that textual elements could ongoingly be “aware of neighbors,” and change as they changed, is as exciting as the sonnet at its inception.

Performative works of e-poetry are not always based on complexity or bio-complexity algorithms. The joy of seeing text perform gravitationally was expressed by one of my students when introduced to an installation of Camille Utterback and Romy Achituv’s Text Rain [37]. He said, “The raining letters…allowed me to feel like I was actually catching [them] and forming words. I had a direct physical impact on the poetry…. My…position in space caused poetry to form out of something that was already there, but it needed to be unlocked by my movements. It made me want to dance in front of the projection screen, so I did. I did a little salsa and some break and pop dance. The letters moved wherever I moved and formed words.”

There are significant similarities between oral poetry performance, as described by John Foley [38], and contemporary electronic poems. In both cases, there is no felt need to experience them “in order”; things happen in pieces, but recurrently; rhythm and cadence are key; and older forms are reactivated to create newer meaning. As in an online work, the “past” of oral epic is a state of mind in the present. The past only exists as relocated to a present performance. Works of e-poetry are prescient with regard to the way contemporary memory is formed and re-mapped into networks. Memory is carried one way by code, another by human cognition, and yet another way by human groups.

The virtuosity of Brian Kim Stefans’s 11-minute Flash performance, The Dreamlife of Letters [39], shows the way history and memory are both concentrated and diffused in an online poem. Assigned to respond to a short “opaque” paper by Rachel Blau DuPlessis, he did so by alphabetizing its words and chopping them up into 36 segments. Feeling dissatisfied with this “sort of antique ‘concrete’ mode,” he then set the words and letters free in a choreographed extravaganza more satisfying and provocative than any of its precursor texts, an intellectual exchange on sexuality and gender becoming a witty performance.

Another practitioner of Flash performance, Ana Maria Uribe, began as a Concrete “typewriter” poet in Buenos Aires in 1968. At that time Venezuelan Jésus Rafael Soto was making optically vibrant paintings with hanging elements that he called Escrituras (Writings), and the Noigandres group of Concrete poets in São Paulo were making ideogrammic structures with explicit reference to European sources. In fact, it was said, “If there is such a thing as a worldwide movement in the art of poetry, Concrete is it [40].” At the same time a Neo-Concrete movement in Rio de Janiero emphasized “happenings,” use of the body, interpenetration of genres, and participation of the spectator.

Uribe was internationally oriented, worked as a translator, and was part of a mail art network in the 70s and 80s. Yet, if we look at an early typewriter poem, From Parmenides to J. P. Sartre, which says, in plant-shape, “It is very strange to be an agapanthus and not a philodendron,” that is, an African lily and not a house plant, we can read a Neo-concrete reference to South American culture as combining indigenous and African, as well as European sources.

Uribe moved from typewriter poems to digital poems in 1997. Her graphic animations integrated values of the Concrete and Neo-concrete positions. Her subjects were the everyday (ladders, zippers, trains) and creatures between worlds, which she called Halfties. Some of her later poems were called “Sirens” or Mermaids. She may have had in mind Kafka’s story, The Silence of the Sirens, in which we learn that “The Sirens have a still more fatal weapon than their song, namely their silence…. And when Ulysses approached them, the potent songstresses actually did not sing…. But Ulysses, if one may so express it, did not hear their silence… [41].” We do hear sound in A Shoal of Sirens [42] and More Mermaids 2 [43], but it is the sound of ocean, matrix, background element. The expressive bodies of the letters, of the Sirens, the

mermaids, have a silence an explorer bent on interpretation may not hear.

Deseo-Desejo-Desire: Three Erotic Anipoems (2002) [44] is the final Uribe (d. 2004) work. Deseo performs—visually, sonically, musically, lettristically—the differences of the word “desire” in Spanish, in Portuguese, and in English. Here we see local and global together—the native tongue, the neighbor tongue, the tongue of Empire —referencing equally a network that binds us all, the extreme specificity of linguistic bodies, and the invested bodies of the spectators who play the animations.

Eight: Translation

Is there a language without any native speakers, an all-border-crossing language? Some would argue for mathematical, visual, or programming languages to fill that role.

John Cayley reminds us that the atomic structure of written language differs “in the two centers of ‘language and civilization,’” and that “these differences are translated to digital media because linguistic structure itself…is transcribed by the entire historical process of digitization, taken to include the design of computing systems and data structures….” Cayley says: “I remain sharply aware that I am complicit with a privileged symbolic structure…recognizing that digitization could have been very different, commensurate with characters rather than letters [45].”

Young-Hae Chang Heavy Industries is a website of text movies by a writing duo based in Seoul, Korea. They express a complex relation to media elements: “Our Web art tries to express the essence of the Internet: information and disinformation. Strip away the interactivity, the graphics, the design, the photos, the illustrations, the banners, the colors, the fonts and the rest, and what’s left? The text [46].” They state that “[d]istance, homelessness, anonymity, and insignificance are all part of the Internet literary voice… [47],” and they make a political choice of default language: “To write, read, and chat in English on the Internet is to implicitly justify a certain history. Certain governments don’t ban or burn books anymore, they prevent access to the Web, meaning they justify a different history than the one [we do] by using English. So the choice of language is probably the biggest historical influence on our work [48].”

Although English is the default language of their pieces, most are available in at least one other language, and their site includes translations into Chinese, Japanese, Korean, English, French, German, and Spanish. Each seems to require something different of the not-so-Spartan means that they do allow themselves: Flash animation, superb pirated jazz, the Monaco font, and text written with savvy and humor.

In considering three versions of the manifesto, Artist’s Statement No. 45,730,944: The Perfect Artistic Web Site, the first in strongly accented, strongly phrased English; the next in smoothly gliding, mono-tonal, densely run-together French; and the last in swift and excited Spanish, we might ask whether the settings — the acute considerations of scale, movement, sequential relations, and timing that produced them — are a particular kind of translation pointed toward conveying, say, the Spanish-ness of Spanish, or whether they enact stereotypic notions of historic cultures.

Poietic works engage translation in many ways, including biological forms of performative translation. Eduardo Kac’s Genesis [49] constructs a collaborative inter-species translation. Kac created a synthetic gene by translating a sentence from the biblical book of Genesis into Morse Code and converting the signs and spacings of Morse Code into the four DNA base pairs. The sentence, chosen for its suspect imperial stance, originally read, “Let man have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moves upon the earth.” The Genesis gene, incorporated into E. Coli, appeared in a gallery installation where people onsite and over the Web could shower it with ultraviolet light, causing real, biological mutations in the bacteria thus changing the biblical DNA/sentence [50]. Kac says, “In the context of the work, the ability to change the sentence is a symbolic gesture: it means that we do not accept its meaning in the form we inherited it, and that new meanings emerge as we seek to change it [51].”

Nine: “Place”

“As Turkish guest workers in Germany watch Turkish films in their German flats, as Koreans in Philadelphia watch the…Olympics in Seoul through satellite feeds from Korea, and as Pakistani cab drivers in Chicago listen to cassettes of sermons recorded in mosques in Pakistan or Iran, we see moving images meet de-territorialized viewers. These create diasporic public spheres…,” says Arjun Appadurai [52]. Is the mediated info-environment a noxious “global” monoculture, the site of partisan enclaves, or does it provide a needed means to deal with global eco-crisis and to meet a yearning for

worldwide engagement of peoples, languages, and cultural legacies to generate hybrid energy?

Anna Barros [53], basing herself on Edward Casey's The Fate of Place, argues for a concept of "place" as mobile event, inflected and caused by living bodies and accommodated to them. Such a body-based sense of place may be deeply saturated with sexual history. Poietic body-based constructions of "place" range from Char Davies's fully enveloping virtual environments, such as Osmose, to Stelarc's insertion of his nervous system into the network for performed telematic input, to milder forms of engagement such as online role-playing games, literary CAVE environments, or interactive reading.

Digital artists constantly cross borders between specific local realities of language and situation — their own and others — and three global limits: the imperial or default language, English (or Chinese); commercial Web interfaces propagated through generic browsers and stereotypic site design; and a set of shared technical specifications and coding languages, the bricks of information architecture. One response of digital poets to this hybrid language arena is to have the interface and its interactivity carry as much of the information transfer as possible.

Regina Célia Pinto, a lifelong resident of Rio de Janeiro, has chosen a particularly literal architectural metaphor for her site, the Museum of the Essential and Beyond That, which hosts a huge range of work by others, including essays on "frontiers today," gallery shows, and a set of "bathrooms" contributed by other writers. The Library of Marvels within the Museum is where her five "books" are found.

In The Newest Song of Exile: Sabiá Virtuality [54], Pinto gives us three (scattered or diasporic) versions of "the same" text: a printed artist's book, an interactive CD-ROM, and the interactive website. She brings together Mexican and Brazilian culture, using Frieda Kahlo images and the poem Canção do Exílio (Song of Exile, 1843) by Brazilian poet Gonçalves Dias. The sabiá-bird, a traditional Rio de Janeiro symbol of home, becomes here a marker for exile-in-place. Here, the multicultural and multiracial citizen of Rio seeks renewal as drugs and poverty destroy the urban environment and only the Samba dance schools can deflect this harsh reality. The site links audio clips of poems from many decades which can be heard one by one, or moused over in unison. The viewer is invited to construct a new "place," to electronically re-paint the picture of Brazil.

Young Hae-Chang Heavy Industries's The Last Day of Betty Nkomo [55] crosses and hybridizes a number of borders. Breaking from their trademark hectoring style, the authors create a dramatic situation featuring an ill woman with an African name. The background music is no longer sophisticated urban jazz but something closer to keening Asian folk music. The situation will sustain many readings, but among them one of an African woman with AIDS who has been abandoned within her society, her mourning relegated to Web readers.

On the Web, space appears as a verb requiring constant activation, becoming "place" as it is received. We are immersed. No account from outside is available. No single account from within constitutes an adequate description. Lisa Jevbratt's 1:1 project (1999 and 2001 update) [56] maps this non-geographic space, the uncapturable extent of the Internet itself. She offers a view of a public location, which we cannot otherwise survey, by using a time-series of interactive images—a technique also used to chart other dynamic entities such as financial markets and weather—and designing different clickable image-maps, or interfaces, to show us the sampled, never repeatable results.

To make her maps, Jevbratt programmed a crawler to search selected samples of all IP addresses. Her results are a "snapshot" of the Web, a whole image with a low resolution. 1:1's title is a play on the idea that these maps have a 1:1 relation to what they map—for these maps are not only guides, or address books, for the Internet; what the crawler finds is indeed the only there "there"; the only "locations" or "places" possible for the temporal informational entities they chart.

Ten: Recursion and Looping

Travel, in a computer, is the illusion of travel. Travel, on a computer, means to stop interacting with this object and start interacting with that one. To travel in an e-poietic object means to travel in a loop.

Loops may be navigable merry-go-rounds such as the St. Paul's clockface in Cape, Cayley, Perring, and Waite's What We Will [57]. Loops may be temporally repeated cycles, at any scale. Loops may be recursive or iterated actions. Loops may be

to-and-fro (fort/da) gestures, which mouse movement always is as the hand returns to “home” position. Loops may be temporally concurrent yet appear spatially orthogonal. Beautiful loop-trajectories for draggable objects that disappear stage left and reappear stage right (or vice-versa) on the screen can be seen in Nicolaus Clauss and Jean-Jacques Birgé’s Dervish Flowers [58].

Though often unaffected by viewer input, or programmed so that they always respond the same way to reader input, loops may also be feedback loops in which the results of user action (or randomization) affect the outcome irretrievably, enabling it to produce unforeseen results. Since they have no end, loops have no inherent duration. They refer forward and backward in time, implying a need to hang around to take it all in, or a need to come back, or a need to sample and decide. Loops allow for travel around sites of breakdown: a linear path is interruptible, but a looped one can twist and meet up with itself.

The poietic object What We Will was initiated by Perring who wanted to do something with the whispering gallery at St. Paul’s Cathedral in London. Describing the goal of the work, Cayley said [59], “At any one time, [the sound] should blend together when you move from one loop to the next. [Perring] has actually done properly musical pieces where you are listening to a piece of music which has an overall time schedule. You can move around and hear different segments of that music, as it were, and at any one point it still sounds correct. It still sounds like you are listening to this overall piece. That whole challenge — the challenge of doing that — seems to be a major part of the rhetoric of new media.”

Being a poet, Cayley at first resisted the dramatic narrative Perring and the photographer wanted, but then came up with a loop structure keyed to the loop of time on the Cathedral clock. Clicking on an hour takes you to a scene that supposedly occurred at that time. You hear dialogue upon entering a scene, but after you’ve heard it once through, it may randomize. The language is constructed such that every sentence refers forward and backwards in time. There are also envelopes which, if clicked, take you to the whispering gallery, or some space where secrets are being whispered. Cayley says, “you can piece it together.” It also suggests a detective story, since it is about secrets and relationships, and it is certainly “about” integration of temporal change in the written layer.

Janez Strehovec, in his presentation at Melbourne DAC 2003 [60], lists 10 kinds of “mobile” reading skills needed when loops replace traditional lines: 1. Jumpiness, glimpsing forward, glancing backward; 2. Viewing words as 3-D objects; 3. Tracking visual units anticipating their next appearance; 4. Zooming and entering textual objects; 5. Mousing over or clicking to link or activate a program; 6. Decoding by reading software; 7. Gestalt or snapshot-like perception; 8. Listening to the audio soundscape; 9. Navigating spatial patterns and animations; 10. Taking an aesthetic attitude toward the textscape as an object that stimulates the senses.

Eleven: Mixed Reality

“Places,” inhabited events, are one kind of poem, soft e-e-spaces (electronic-ephemeral) that present what cannot be seen elsewhere, either because they visualize mathematics of a higher dimension or because they enact fantasy. A fantastic origami of spaces ever recontextualized: can you navigate through it or does it move around you? Both.

In Screen, Noah Wardrip-Fruin, Josh Carroll, Shawn Greenlee, and Andrew McClain created a piece for a CAVE [61], a room with one open side into which one walks with special goggles and pointer in order to activate virtual reality displays. In Screen, all walls are covered with narrative text which starts to peel off at a certain point and seem to fall toward the reader, who discovers she can bat the words back at the walls, where they land on the nearest open wall space, thereby creating neologisms and new text arrangements. When enough words have left the wall, without being batted back, all the rest come off at once, flock around the reader and fall to the floor.

The CAVE reader’s “reality” includes a sense of standing in the physical CAVE while maintaining, through the open front wall and open ceiling, a sense of the outer room, all the while absorbed in reading, warding off, or repelling a snowstorm of text. And if the glasses shift, slip, slightly malfunction? To what sliding world does the vestibular system respond? Brain sensors are stimulated equally by word and thing.

Using virtual space to change physical space is a poietic and political task. Poetrica aims to build a community for the commuter based on non-semantic language. Christina McPhee and Henry Warwick, by contrast, in Slipstreamkonza, create a sonic topology from a “source text” that is a datastream, the carbon absorption-and-release

data from the tall grass prairie, “as if to recreate the breathing of the planet during global climate change [62].” Their focus is to let physical space change virtual space, to let the earth write to us in a way that will engage us bodily, instead of us marking the earth.

Such a shift in focus turns us back to an aboriginal idea of listening to the land. Aboriginal listening was entirely biophysical, whereas listening today is via a ring of surveillance satellites. The data received from these is read one way by the receiving machines and another way by the scientists charged with one or another type of interpretation, but it remains under-read by poietic artists. To achieve effective listening, we will need to achieve affective listening, and the cyberpoets of mixed reality are beginning to address themselves to this task, one that far exceeds the old mandate of an analytic “scientific visualization” which Lev Manovich suggests aims at reduced, “anti-sublime” representation [63].

By contrast, Lisa Jevbratt [64] suggests that “‘images’ of the data landscape are not high resolution enough for an aesthetic decision to be made...In the task of visualizing huge datasets this means that we need to avoid making assumptions about the meaning of the data in order to allow meaning to find an opportunity to occur.” Jevbratt suggests that “our ability to perceive meaning [may be] numbed by the loudness of it.” We can be sensitive to “least speech,” in Muriel Rukeyser’s phrase. As with the Morelli method for painting identification, best accomplished by considering the way painters paint earlobes or fingernails, it turns out that the distinctive arises most clearly where intention and effort retire.

The virtuality of e-poetry in all its forms, its constantly shifting eventfulness, can provide us with the mindset and perception-set needed to listen to the earth, to process huge datasets that are sublimely overwhelming, in that we cannot take them in and understand them rationally, but nonetheless might “hear” and be affected in our bodies through indirect and “least” speech, if present to us with high enough resolution in a poietically resonant interface.

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Stephanie Strickland is both a print and digital hypermedia poet. Her Poem V is an intermedial work consisting of a double poetry book from Penguin(V: WaveSon.nets/Losing L'una), a Web component cited at book center(Vniverse, http://vniverse.com, created with Cynthia Lawson), and a supplementary interactive Flash poem (Errand Upon Which We Came, created with M.D. Coverley, http://califia.hispeed.com/Errand/title1a.htm). Strickland's poems True North, http://www.eastgate.com/catalog/TrueNorth.html, and The Ballad of Sand and Harry Soot, http://wordcircuits.com/gallery/sandsoot/, have won simultaneous awards in both print and electronic forms.

Strickland's essays about electronic literature appear online in ebr (Electronic Book Review) and in collections from MIT Press and Intellect Press (England). As the McEver Chair in Writing at the Georgia Institute of Technology, she created and produced TechnoPoetry Festival 2002. She has taught hypermedia literature as part of experimental poetry at many universities and serves on the board of the Electronic Literature Organization.

Citation reference for this Leonardo Electronic Almanac Essay

MLA Style

Strickland, Stephanie. "Writing the Virtual: Eleven Dimensions of E-Poetry." "New Media Poetry and Poetics" Special Issue, Leonardo Electronic Almanac Vol 14, No. 5 - 6 (2006). 25 Sep. 2006 <http://leoalmanac.org/journal/vol_14/lea_v14_n05-06/sstrickland.asp>.

APA Style

Strickland, S. (Sep. 2006) "Writing the Virtual: Eleven Dimensions of E-Poetry," "New Media Poetry and Poetics" Special Issue, Leonardo Electronic Almanac Vol 14, No. 5 - 6 (2006). Retrieved 25 Sep. 2006 from <http://leoalmanac.org/journal/vol_14/lea_v14_n05-06/sstrickland.asp>.

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