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2018 Davin Heckman and James O'Sullivan, "Electronic Literature: Contexts and Poetics"

41-52 minutes

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Electronic Literature: Contexts and Poetics

Davin Heckman (Winona State University) & James O'Sullivan (University College Cork)

¶ 1 This essay is part of the third iteration of the anthology. Since public review and commentary help scholars develop their ideas, the editors hope that readers will continue to comment on the already published essay. You may also wish to read the draft essay, which underwent open review in 2017, and the project history.

Introduction

¶ 2 What is electronic literature? Producing a conclusive answer requires a response to a different but related perplexity that has persisted for far longer: What is literature? For Derrida, the "institutionless institution" of literature is "a paradoxical structure,"

"*constructed* like the ruin of a monument that basically never existed" (42). Electronic literature should be construed not as other but rather as a construction whose literary aesthetics emerge from computation—a system of multimodal forces with the word at its center. Since first garnering critical attention, electronic literature has been theorized and critiqued in a variety of ways, but it remains as ambiguous as ever. It is ambiguous because it is amorphous, and for each trait that might be classified, a new form, or potential, emerges from previously unanticipated evolutions or juxtapositions.

¶ 3 In its earliest days, electronic literature was closely associated with the literary hypertext. The emergence of narrative selections—of choice—was not exclusive to digital media, but the computer allowed these selections to be rendered in previously unforeseen ways. With the proliferation of new technologies, this trend shows no sign of abating: practitioners have a continuous stream of new modes of production to adopt and manipulate for the purposes of artistic expression. Where we once had the hypertext, we now have, for example, augmented reality, and there is no predicting where the literary may reside decades from now. What has remained constant, however, not just within the context of this digital epoch, but over centuries, is the presence of the literary.

¶ 4 Electronic literature, essentially, must be electronic and literary. Even if we cannot define the *literary*, we can at least recognize it, and, from recognition, we can begin to build meaning. This chapter attempts to do just that: offer readers an account of some of the contexts that suggest literature that is inherently digital and extrapolate from those contexts a poetics suited to works of this nature.

¶ 5 Technological influences on contemporary modes of expression

have given rise to new literary forms that continue to attract authors and intrigue critics. While the origins of electronic literature can be traced back several decades, the field, as both an artistic movement and a branch of scholarship, is still in its formative stages. Being literary and bound to rapidly evolving digital aesthetics, electronic literature resists stable definition, but some aspects of it lend themselves to classification. *Electronic literature*, as the term has come to be used by the broader field of digital scholarship, does not simply refer to static text offered through screen media. N. Katherine Hayles defines a work of electronic literature as "a first-generation digital object created on a computer and (usually) meant to be read on a computer" (3). A more recent definition, by Serge Bouchardon, is based on the same principle distinction between "*digitized* and *digital literature*":

> ¶ 6 We can retain the idea that the mere fact of being produced on a computer is not enough to characterize digital literature. Digital literature uses the affordances of the computer to dynamically render the story. If an e-reader simply displays text in the way a printed book displays text—the only difference being that to advance the text one scrolls rather than turns a page—this is not "digital literature." It is printed work digitized for optimal display in a portable computational environment. Digital literature is algorithmic. It changes as the reader engages it. (3)

¶ 7 Electronic literature has emerged from intermedial juxtapositions of literary and computational aesthetics, and it resides at the juncture between the most contemporary linguistic and multimodal aesthetics, manipulating language through digital paratextuality and technical structures. In this sense electronic literature, or e-lit, is not to be confused with text that has merely

been remediated; remediation being "the representation of one medium in another" (Bolter and Grusin 45).

¶ 8 Literature probes the entire apparatus of linguistic communication, expands the range of expression, and debunks the illusory certitudes of ordinary speech. In an age pulled apart by the crisp declarations of twittering tyrants and the general malaise of a postfactual society at war with itself, literature doubles down: it seeks meaning in nonsense and makes strange what is known. Instead of tearing down one slogan to replace it with another, the literary imagination seeks to carve out worlds within. To be sure, literature, electronic or otherwise, is not the only political project that matters; it is not even, in itself, a "political project" at all. Rather, it is liberation by another means. To illustrate this, one might think of language as the historical image of the police call box: a ubiquitous reminder of order, a means to mobilize police action, and a holding cell for those who violate laws. But in the hands of literary artists (and their companions, the readers who travel with them), this box is bigger on the inside than it is on the outside, it bends the spatiotemporal laws that keep us bound, and it brings us opportunities to witness, wonder, intervene, reflect, and transform. The digital has simply expanded the scope of such opportunities, but with every expansion there is also constraint, and the hand of the author or artist produces meaning from within such confines. In short, what we have here is literature, but of a different sort, and difference is valuable.

¶ 9 While print can complement a work of electronic literature, computation should constitute some inherent component of the piece's aesthetics. Even where a material connection between print and digital is absent, many aesthetic conventions persist between

the forms: "digital technology advances poetry into dynamic areas that were at least partially available in the prehistoric and even pretechnologic era" (Funkhouser, *Prehistoric Digital Poetry* 5).1 Identifying the precise point of demarcation between literature that has been remediated and literature that is born digital can prove problematic. As readers, we must be cautious not to confuse formats with poetics, placing artificial boundaries between forms of digital artistry for critical convenience. While the aesthetics of electronic literature should not be reduced to text on a screen, a piece of digitized print literature could incorporate some innovation that allows us to classify the work, in some respect, as born-digital. What we can gather from classifying works is that the practice of digitizing print literature *in itself* does not constitute electronic literature and that print literature can be reimagined through computation.

¶ 10 While Hayles's definition of electronic literature—as "a first-generation digital object created on a computer and (usually) meant to be read on a computer"—is perhaps the most widely used, many critics have elaborated on the nature of the art. Espen J. Aarseth's cybertextuality, or what he referred to as "ergodicity," was among the first of the major "post-hypertexual" theories. A text is considered ergodic when "nontrivial effort is required to allow the reader to traverse the text" (1). Early delineations tended to focus on nonlinearity and on the potential for electronic literature to possess a perceived "ability to vary, to produce different courses" (41–42). Traversal functions have remained central to the appreciation and interpretation of electronic literature, but more recent examinations of the form have jettisoned the precarious notion of linearity. Noah Wardrip-Fruin notes that *electronic*

literature is simply "a term for work with important literary aspects that requires the use of digital computation" (163). This is aligned with the Electronic Literature Organization's definition, which encompasses any work "with an important literary aspect that takes advantage of the capabilities and contexts provided by the stand-alone or networked computer" ("What Is E-Lit?").

¶ 11 The evolutionary essence of electronic literature makes settling on a consistent ontology a difficult, if not altogether undesirable, undertaking. The rapid proliferation of creative technologies has lent itself to this transience. Scott Rettberg hits upon the crux of the matter when he describes the field as "a kind of moving target" (93). Situating digital constructs on a spectrum of computational art is perhaps a more pragmatic strategy than precise ontologizing. Astrid Ensslin's literary-ludic2 spectrum is the methodological realization of ludoliteracy's tendency to "exhibit various degrees of hybridity," the "complex expressive processes" of digital media meaning that this mode typically refuses to fall "neatly into generic or typological categories" (43–45). Accepting that electronic literature can be many things across a broad spectrum allows us to move beyond the quandaries of definition to an inclusive critical framework that is more readily applicable to interpretations of born-digital art. Electronic literature can take many forms—hypertexts, codeworks, literary games, augmented realities—so much so that many forms of its earliest manifestations have already been lost to history, and there exists an array of future iterations yet to be conceived.

¶ 12 As counterintuitive as it may seem, *electronic literature* needs to be considered as an umbrella term that incorporates an ever-increasing range of literary forms that use a larger sensorium of

effects than traditional literature—electronic literature is inherently multimodal. Electronic literature consistently relies on language and computation: the latter establishes meaningful rules that manipulate the former, sometimes based on reader interactions. These rules shape the content through dynamic procedures that cause the literary to emerge as much from the medium as from its content. E-books, for example, usually contain print literature that has been relocated from the page to the screen—these books benefit from technology's disseminative potential but typically not its creative affordances. Digitized and digital literature differ in their presentation and expression—digitized literature mirrors the codex on a screen, whereas digital literature allows computer-driven transformations to occur beyond the surface; the impact of the digital is not merely seen in the display, but embedded throughout the entire aesthetic configuration. Electronic literature is work that could only exist in the space for which it was developed/written /coded—the digital space, which, while commutative, cannot be without the technical affordances of its underlying systems.

The Emergence of Electronic Literature3

¶ 13 Electronic literature is a continuation of aesthetic practices that were in existence long before the advent of digital computing. While ease of dissemination is now a major benefit of the medium, prior to consumer electronics and the contemporary Web, works of creative computation presumably went largely unpublished and have since been lost. Some first-generation works have been preserved to a degree, but first generations begin at the point of general discovery, and one can only speculate about the vast quantities of material that never entered the public sphere. The sad reality is that there

are probably hundreds of obsolete drives containing electronic literature's earliest experiments, and these dormant literary archives are more likely to occupy a landfill than a library.

¶ 14 Some of the earliest works of electronic literature that received (relatively) popular and critical attention are Judy Malloy's *Uncle Roger*,[4] first released in 1986 as a serial on the WELL's[5] Art Com Electronic Network; John McDaid's *Uncle Buddy's Phantom Funhouse*,[6] a hypertext novel produced with HyperCard 2.0 and commercially released in 1993;[7] Shelley Jackson's *Patchwork Girl*,[8] originally published in 1995 on 3.5 floppy disks and more recently released on flash drives; and Bill Bly's *We Descend*,[9] which initially appeared in 1997 and was re-released, with new content, on the Web in 2011 (Malloy 199–200). Robert Coover, in "Literary Hypertext: The Passing of the Golden Age," his October 1999 keynote address at the Digital Arts and Culture Conference in Atlanta, Georgia, refers to Michael Joyce's *afternoon, a story*, Malloy's *Its Name Was Penelope* (1989), Stuart Moulthrop's *Victory Garden* (1991), and *Patchwork Girl* as the "early classics."

¶ 15 Much of electronic literature's first generation of works formed part of the Eastgate School,[10] which saw the commercial publication of numerous canonical hypertextual fictions through Eastgate Systems's *Storyspace* platform. Foremost among these early hypertexts was Michael Joyce's *afternoon, a story*, first demonstrated at the 1987 meeting of the Association for Computing Machinery and published in 1990. Joyce presented the paper in question, "Hypertext and Creative Writing," alongside Jay David Bolter. In describing the mechanics of the literary hypertext, Bolter and Joyce pointed to "a new literary dimension" in which authors can work: "Instead of a single string of paragraphs, the author lays

out a textual space within which the fiction operates" (43, 42). Many of the early Eastgate titles were constructed this way, offering a variety of paths through which the reader can traverse literary fragments known as lexia.

¶ 16 As more intuitive and sophisticated multimedia applications and computer systems became available, electronic literature evolved into a variety of increasingly intermedial forms. In 1999 Scott Rettberg, Robert Coover, and Jeff Ballowe founded the Electronic Literature Organization (ELO), a nonprofit initiative intended to "promote the reading, writing, teaching, and understanding of literature as it develops and persists in a changing digital environment" ("History"). Founded in Chicago, the ELO established its first institutional headquarters at the University of California, Los Angeles, in 2001. In 2006 the organization moved to the University of Maryland, College Park, before relocating to the Massachusetts Institute of Technology in 2011. This year saw the ELO move to its current headquarters, in Washington State University, Vancouver. The publication of the ELO's first *Electronic Literature Collection* in October 2006 (fig. 1) was a milestone in the advent of electronic literature's being regarded as more than merely hypertextual. It is, as Chris Funkhouser claims, "the first major anthology of contemporary digital writing" ("Electronic Literature"). Edited by Hayles, Nick Montfort, Rettberg, and Stephanie Strickland, the collection marks electronic literature's progression toward increased multimodal, intermedial, and computational complexity.

¶ 17





Fig. 1. A screenshot of the home page of Electronic Literature Collection, vol.1, 2006, collection.eliterature.org/1/index.html.

¶ 18 Composed of sixty works of electronic literature, the collection offers readers an opportunity to browse by genre. The *Electronic Literature Collection* embraces a range of technologies, including "ambient," "animation/kinetic," "constraint-based/procedural," "generative," "Flash," "Javascript," "Shockwave," and "VRML" ("Contents by Keyword"). Mark C. Marino's review in *Digital Humanities Quarterly* refers to the collection as a "menagerie of forms" that "offer a sense of the perpetual metamorphosis of electronic literature." This collection, as Marino rightly asserts, is all about "variety". Individual authors had moved beyond the hypertext long before 2006, but publication of the ELO's first collected volume was the field's first definitive statement on electronic literature's being more than just links. In February 2011, the second volume of the *Electronic Literature Collection*, edited by Laura Borràs, Talan Memmott, Rita Raley, and Brian Kim Stefans, was published, followed by a third volume in 2016, edited by Stephanie Boluk,

Leonardo Flores, Jacob Garbe, and Anastasia Salter. The ways in which the field has evolved can be appreciated through these collections, which offer snapshots of the movements, technologies, and techniques favored by artists at different times. The canon is, of course, far broader than what can feasibly be presented in any set of anthologies, and as more development companies turn to the ludoliterary, we are seeing a much higher volume of electronic literature permeating the mainstream.

¶ 19 Although several books provide a historical perspective of electronic literature,[11] much work remains to be done to build a literary history of electronic literature. Recent research by Moulthrop and Dene Grigar for *Pathfinders*, a preservation project funded by the National Endowment of the Humanities, has uncovered historical information about the aforementioned early works of electronic literature by McDaid, Malloy, Jackson, and Bly. The *Pathfinders* project is a significant contribution to the field's relatively sparse, and increasingly jeopardized, literary history.[12]

¶ 20 Rather than approach the question of electronic literature by mapping out its historical development or its relation to social and institutional organizations that engage in its creation, consumption, criticism, and curation, one can attempt to interrogate the ways "writing with" a computer can help authors add new dimensions to the literary as a species of form. As Flusser explains, writing has some preconditions:

0. The blank surface
1. A means to mark the surface
2. An alphabet
3. Knowledge of a "convention" that allows this alphabet to

correspond to something else

4. Knowledge of the proper form for constructing this alphabet
5. Knowledge of a specific language
6. Knowledge of this language's rules of writing
7. An idea that can be communicated through writing
8. A motive to communicate the idea through writing (2)

¶ 22 For Flusser, these preconditions recede into the background of our consciousness as the habit of writing supplants the conscious effort with which we learn to write. For instance, it is difficult to know when a child recognizes the relation between written and spoken words, and a child learns the significance of specific words later. Later still, a child begins reading new words. And, of course, it is entirely possible for a child to never learn the written language and still be able to communicate complex ideas through verbal means alone. What we should note is that writing itself does not enable complex communication—it simply complicates communication. But if we do not make these preconditions explicit, we forget how writing works.

¶ 23 The introduction of an accessible form of recording and transmission, the emergence of democratic theories of governance, and the dream of universal literacy engage the general public in the translation of everyday practices into written text. These everyday practices, in turn, feed into abstract practices of documentation, planning, and conceptual thinking surrounding archivable, teachable, and replayable formats that permit us to further distinguish between noise and pattern, introducing notions that the patterns themselves might be compared, scrutinized, rejected,

accepted, and hypothesized. This feedback loop provides the foundation for critical thinking and public discourse. Thus, the historical coincidence between the emergence of print literacy and the accelerated production of knowledge has conditioned us to think of these two practices as intrinsically linked. However, as the electronic literature movement has shown, other routes to the same goal are possible.

¶ 24 As a number of scholars have found, many of the insights and impulses we associate with contemporary digital writers were anticipated in the work of earlier writers. Chris Funkhouser's *Prehistoric Digital Poetry*, the Po.Ex Digital Archive of Portuguese Experimental Literature, and George Landow's *Hypertext* are projects that represent the practical and theoretical ways that the qualities we associate with digital media were conceptually evident to writers before the development of advanced digital technology . Once the computer became available, even before digital literary texts were formally produced, literature saw a period of intense protodigital experimentation and reflection. Nowhere is this clearer than with the Oulipo writers, who explored notions like creating all the possible works through a mathematical formula (as Raymond Queneau did in his 1961 *Cent mille milliards de poèmes*, a work that contains 100,000,000,000,000 poems) or the creative possibilities of writing under constraint (like Georges Perec in his 1969 *La Disparition*, a novel that does not include the letter *e*). Although the appeal of such works often resides in concepts, the notion that literature can be understood through formal processes reflects the sheer impact of the technical worldview on our understanding of human expression.

¶ 25 Yet, there is something critical to the relation between print

literature and electronic literature. Funkhouser, for instance, explains, "Poetry is poetry, and computer poetry—though related to poetry—is computer poetry" (*Prehistoric Digital Poetry* 80). In the context of the argument he has developed, this distinction is significant: reading electronic literature as a strict continuation of a literary history or as a digitization or extension of print misses the point. The taxonomy of literature does not produce even parallels across its subdivisions, so it is a mistake to believe that digital mediality would simply mirror the generic features of the neighboring branches. In poetry, aural qualities are formal elements that allow one to draw distinctions. In the novel, themes, tropes, and narrative qualities are prioritized. However, though a sonnet has certain sonic qualities that designate it as such, these formal characteristics are tied to narrative and thematic qualities as well. Thus, a sonnet might have some topical affinity with, say, the low literary form of the contemporary romance novel. This is simply to say that literature, even at its most canonical, suffers from a promiscuous ontology. At some level, the application of this ontology to emerging media, while a useful heuristic at times, must occasionally be hacked, transmigrated, or overwritten to permit recognition of different formalities.

¶ 26 Any reader who expects digital works to simply continue down the path of print literature as it has progressed through the twentieth century is going to find that electronic literature is inferior or imitative in some respects. For instance, developing a voice that is convincingly personal in its human patterns while exhibiting naturalistic eccentricities is something that computers are not good at yet—either the program exhibits recognizable character traits through generalization, or the program generates surprise through

randomization, each representing abstracted and extreme qualities that are successfully balanced in the well-rendered character. To transcend this, writers can intervene directly in the process through writing, or they can experiment with algorithms, parameters, or databases to craft a more nuanced generalization. The third option, which is much harder for readers and writers nurtured on traditional forms—but which finds encouragement in aspects of the avant-garde sensibility, without necessarily carrying the ideological weight—is to simply explore the limits of the available tools without worrying about whether or not works line up with prior practices (in other words, Does a work of prose fiction have to look like a novel? Does a poetic work have to look like a poem? What signs can literature be made of?). For purely historical reasons, we must, as demonstrated by Funkhouser and Hayles, consider that electronic literature is materially different from print literature and can thus benefit from a liberal attitude toward historical literary criteria—a liberality that is offset by a rigorous analysis of the properties of the medium itself. When the inherited literary criteria do not apply, or only partially do, the attentive reader should recognize that something else might be happening in the text beyond mere novelty.

¶ 27 However, by working with and against these technical limits, the writer is engaged in a kind of poiesis that parallels the challenge that words have historically presented to authors, only by way of an altered system of representation. If early novelists, for instance, explored the potential of the epistolary form to create the pretext necessary for the experience of the text as literature, one can argue that contemporary writers are engaged in similar practices with computers. Is the epistolary format strictly "about" letters being

exchanged? Or is it about simulating a record of a familiar form of text-based communication between two subjects? If writers developed and readers learned dialogue conventions that enabled conversations to unfold on the printed page, we can say that digital pioneers are exploring and contemporary readers are field-testing new conventions for the experience of a literary representation. The goal of the author, then, is not to mimic the formal practice of indicating dialogue, but to facilitate a calculated transmission of that dialogue to a hypothetical reader in a manner consistent with the formal, technical, and narrative priorities of the work. This insight is important for critics because it suggests that there is enormous potential in treating electronic literature like traditional print literature, provided we engage in this treatment retrospectively rather than the other way around. If we look at literature and ask how electronic literature represents a hypothetical future, we judge the not-yet-created based on the material accidents of the old. However, if we accept electronic literature without speculation as contemporary literature and read backward into history, we can see old literary techniques more clearly, recognize the determining aspects of history, unveil components of the dialectical process that are otherwise concealed, and, finally, improve more broadly on the theories of literature, literacy, and, ultimately, language itself.

¶ 28 Today, it is difficult to imagine writers who do not employ some aspect of digital process in their work, in composing, editing, or publishing, but the fact remains that the digital is not simply a technology that has washed over the field of literature, resulting in electronic literature as a default practice. Indeed, electronic artists, while often striving toward the cutting edge, are also likely to spend years exploring a particular format to experience the full range of

affordances that might be found, recognizing that some affordances only arrive through habitual use as the form itself becomes representative of something. Writers make creative use of ubiquitous forms, expanding the range of expression while having fun with emerging habits of Web readership. Many writers have found in the techniques and technologies of writing occasions to reflect on the act of writing itself. This reflection is so focused, in fact, that there is a community of writers, publishers, and critics that labors specifically in and around the affordances and limitations of the computer.

¶ 29 In the work of Richard Holeton, readers will find a consistent tendency to exploit commonplace digital forms for literary effect. His early work *Frequently Asked Questions about "Hypertext"* (fig. 3) uses the frequently asked questions (FAQ) convention to support a comprehensive satire of digital forms.

¶ 30

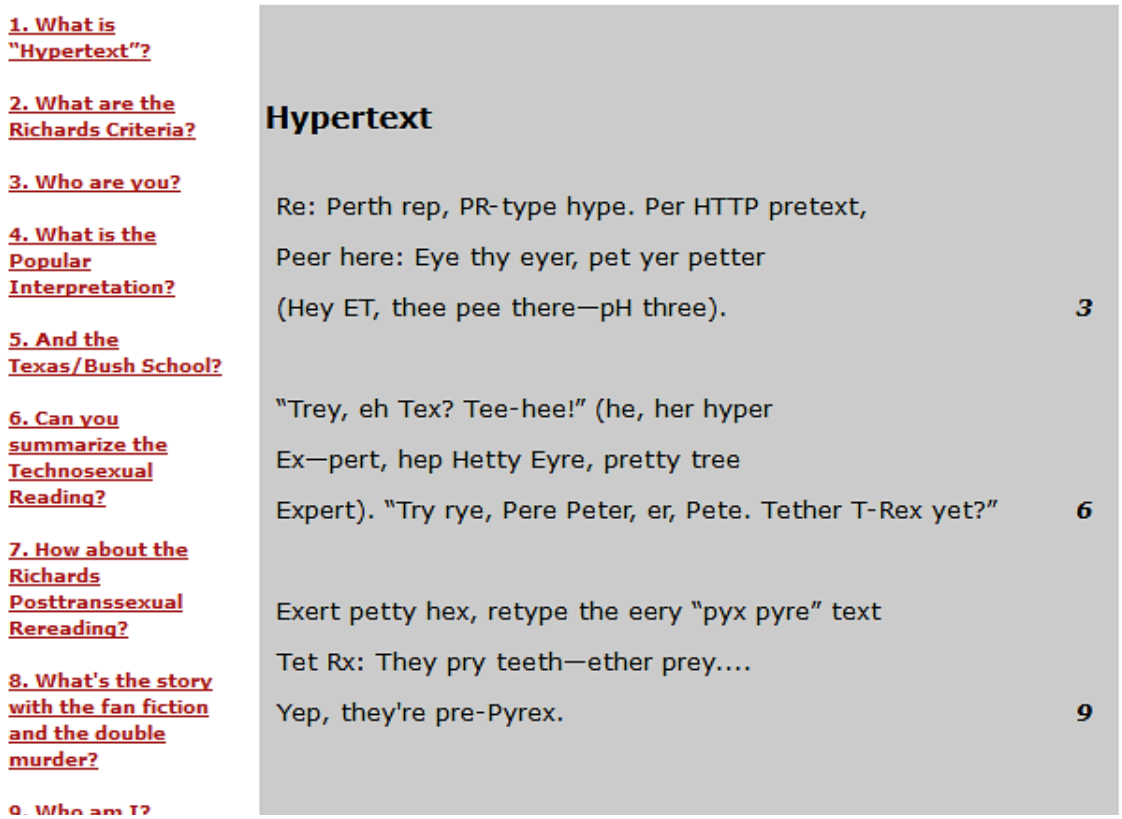


Fig. 3. A screenshot of the home page of Richard Holeton's Frequently Asked Questions about "Hypertext." From Electronic Literature Collection, vol. 1, Electronic Literature Organization, 2006, collection.eliterature.org/1 /works/holeton__frequently _asked_questions_about_hypertext/index.html.

¶ 31 The piece purports to answer common questions about the anagrammatic poem "Hypertext," by "Alan Richardson," and it performs this work, appropriately, as a hypertext. Those familiar with the FAQ format understand that it is implicitly fictional, since FAQs are written in anticipation of a hypothetical reader's questions. At best, FAQs are culled from actual questions and streamlined into the simulated perspective of a typical reader. At their most inventive, FAQs contain questions that are purely speculative, reflecting what the creators think a reader should know. In keeping with the pragmatic mission of the FAQ format, the questions and answers tend toward a kind of abstract precision. When FAQs fail to answer a reader's question, it is usually because of a solipsism and circular ontology that, in itself, is a conceptual hypertext that leads toward an idealized form of "customer satisfaction." In the process of satirizing the FAQ format, Holeton tells a story about the controversy surrounding the poem and thus manages to pull a host of other aspects of digital communication into this elegant work. The fictional poet, Alan Richardson, is alleged to be a tech-boom millionaire whose poem was circulated virally through e-mail. Yet, he is a mysterious figure who has "disappeared," exciting the interest of conspiracy theorists, literary critics, fan-fiction communities, and hackers, who are all represented in the FAQs. What at first appears to be a simple satire of digital banality gives way to a sprawling world of competing

speculations that undercut the solidity of the work's asserted form. In other works, like "Custom Orthotics Changed My Life" or *Voyeur with Dog*, Holeton uses the professional slideshow format, complete with bullet points and colorful charts, to tell comically banal stories of human folly and tragedy. Although these works are new arrivals on the literary scene, they evoke an entire history of literary practices that exploit the norms of language and explore its potential.

¶ 32 The evocation of this history is evident in contemporary screen fictions, even in technically complex developments that incorporate state-of-the-art components like expansive playable spaces, physics engines, and virtual and augmented realities. Ensslin's spectrum is both expanding and contracting: the range of technologies that offer creative affordances is growing, but the aesthetic boundaries that dissect this scale are being drawn closer together. The great irony of electronic literature, often heralded as an esoteric field on the periphery of literary, media, and digital scholarship, is that literary games have never been more popular. In the mobile game market, where the audience is usually casual gamers, we see that hypertext has fashioned a revival: games like *Reigns* (2016) and *Lifeline* (2015) appear like recent additions to the iOS games catalogue, but they are structurally no different from the fictions of the Eastgate School—the narrative progresses as the user chooses among a selection of paths, which lead to different lexia. It is true that these games have been adapted for the specifics of the platform—*Lifeline* mimics mobile communications, whereas *Reigns* operates as something of a commentary on Tinder (players select narrative paths by swiping left or right)—but the affinities with their antecedents outweigh these particulars.

¶ 34



Fig. 4. A screenshot of Mez Breeze and Andy Campbell's All the Delicate Duplicates. From Steam, Feb. 2017.

¶ 35 *Duplicates* is as beautiful as it is technically impressive, and it signals how artists like Breeze and Campbell are drawing electronic literature in from the outskirts of the canon—this work has received mainstream accolades. Among other awards, it won the 2015 Tumblr International Digital Media Prize, and it was an official selection at the 2015 Showcase Parallels Freeplay Independent Games Festival, as well as a finalist for the 2014 BBC Writersroom / The Space Prize for Digital Theatre.

¶ 36 Such works are both the present and future of electronic literature—a future that possesses forms we cannot even begin to anticipate. Consider the trajectory of Breeze and Campbell: like their contemporaries, they would have started with command-line, inherently textual environments—Mezangelle is representative of

these beginnings. Literature has always been textual, and the computer afforded an opportunity for a reciprocative textuality. Now the domain is one in which the real and fantastical are continuously merged, through immersion and augmentation. But even as technologies advance and the works of the pioneers look increasingly archaic, their significance has never been more apparent. The schemata that the pathfinders—to borrow from Grigar and Moulthrop—established remain evident, even as the successors have overlaid them with increasingly intricate multimodal mosaics. The aforementioned mobile games and the prize-winning game worlds produced by Breeze and Campbell are but the most contemporary iteration of a long line of literary practices. Electronic literature now has its own lineage; where Shelley Jackson used hyperlinks between segments of text, Breeze and Campbell use 3-D objects developed using a resource-intensive engine. All this—drawing attention to examples of digital works, both old and new—is simply a means of demonstrating that the goal of the form remains consistent: to manipulate language, to transform the linguistic into the literary by means of computation.

¶ 37 In many cases, the work of electronic literature practitioners results strictly in objects that could not exist on the printed page, and thus we should be reluctant to say that the concepts these writers explore would be inconceivable to anyone else. Oral poetry, song, and dramatic literature are all time-based. Gaming, ritual, and call-and-response performances are all interactive or collaborative storytelling techniques. Pictographic writing systems, religious art, ritual, and drama are all visual. Music, oratory, and performance all have audio components. Many games and rituals include elements of chance or creative modes of meaning generation. Architectural

spaces and medieval manuscripts are hypertextual for readers. At times the print tradition has looked to these close relations to achieve a perspective of estrangement from conventional language, to introduce a reflexive process into the act of reading and writing text. The miracle of electronic literature is not that computers are current; the miracle is that it is so thoroughly anticipated, suggesting that the literary perspective is a viral, feral, primordial tendency of human consciousness. But everyday linguistic practices reflect how human beings cannot live without contemplating, modifying, and sharing ideas. The literary mode seeks to represent and reproduce these practices in technical objects. Though hardly the expression of individual artistic genius, memes circulate through this raw literary tendency. The aggregate effects of small acts of liking, sharing, and making as a twenty-first-century writing practice constitute a mode of poetic activity to which the main channels of literary theory have not responded. Electronic literature as a creative practice, a focal point for a community of readers, and a subject of scholarly discourse provides an alternative zone in which the techniques and technologies of language are open for criticism and speculation in a period of radical transformation.

Notes

¶ 38 1. The treatments of this lineage that readers may find useful include Glazier's and Di Rosario's.

¶ 39 2. *Ludic* refers to the characteristics of play: in this context, characteristics one would typically associate with a video game.

¶ 40 3. We would like to acknowledge Dene Grigar, president of the

Electronic Literature Organization and associate editor of this anthology, for her guidance on this section.

¶ 41 4. For more information about *Uncle Roger*, see "Judy Malloy's *Uncle Roger*," a section of Grigar and Stuart Moulthrop's *Pathfinders* project (scalar.usc.edu/works/pathfinders/judy-malloy).

¶ 42 5. The WELL, or Whole Earth 'Lectronic Link, is a virtual community started in 1985 by Stewart Brand and Larry Brilliant (www.well.com/aboutwell.html).

¶ 43 6. For additional information about McDaid's work, see "John McDaid's *Uncle Buddy's Phantom Funhouse*," part of the *Pathfinders* project (scalar.usc.edu/works/pathfinders/john-mcdaid).

¶ 44 7. HyperCard is a hypermedia programming application for early Apple systems, such as the Apple Macintosh and Apple IIGS, that predates the Web. Launched in 1987, its last stable release was offered in 1998, before being withdrawn from sale in 2004.

¶ 45 8. For more information about *Patchwork Girl*, see the "Shelley Jackson's *Patchwork Girl*" section of the *Pathfinders* project (scalar.usc.edu/works/pathfinders/shelley-jackson).

¶ 46 9. For further information about *We Descend*, see "Billy Bly's *We Descend*," part the *Pathfinders* project (scalar.usc.edu/works/pathfinders/bill-bly).

¶ 47 10. Collecting many of these works for a 2012 exhibition entitled *Early Authors of Electronic Literature: The Eastgate School, Voyager Artists, and Independent Productions*, Dene Grigar uses the term *school* to describe a body of works published by Eastgate. Thus "The Eastgate School" denotes literary hypertexts authored using Eastgate's *Storyspace* software, which assisted in the

creation and reception of many early works of electronic literature. Although Eastgate was not the only early publisher (or the first publisher) of electronic literature, it succeeded in creating an identity for literary hypertext that could facilitate critical discourse for an emerging community. In an interview with Jill Walker Rettberg, Mark Bernstein, Eastgate's editor and chief engineer, explains, "[T]he fact that there was a publisher that looked like a recognisable sort of organization gave the critics a chance to pitch their stories to their editors, and editors who were inclined to find a technological line, or at least not repulsed by the idea of literary machines, could be convinced, since there was something that looked like a small press. That was important." In an interview with Judy Malloy, Bernstein explains that the standardization offered by a committed authoring system and literary publisher "gets us beyond the broad generalities and simple-minded media essentialism that still dominates so much discussion of the Web." This collection of works by Eastgate establishes an identity for an important aspect of the field, with anchor points that enable thoughtful comparisons and evaluations of work.

¶ 48 11. These books include Chris Funkhouser's *Prehistoric Digital Poetry* (2007) and Eduardo Kac's *Media Poetry* (2007).

¶ 49 12. This section provides little more than a frame of reference for those new to the field; readers with a particular interest in the history of electronic literature would be better served by engaging with such projects as *Pathfinders* and, indeed, by contributing their own research to help fill a major gap in the field.

¶ 50 13. Mezangelle is a language developed by the electronic literature artist Mez Breeze, who describes it in detail in an interview (2016) that accompanied a presentation of her work in

Rhizome's *Net Art Anthology*.

Useful Resources

¶ 51 *CELL: Consortium on Electronic Literature*
cellproject.net

¶ 52 *Electronic Literature Collection*
collection.eliterature.org/

¶ 53 *Electronic Literature Organization*
eliterature.org/

¶ 54 *Electronic Literature Timeline*
electronicliterature.org

¶ 55 *ELMCIP Electronic Literature Knowledge Base*elmcip.net

¶ 56 *Pathfinders*
dtc-wsuv.org/wp/pathfinders/

¶ 57 *I ♥ E-Poetry*
iloveepoetry.com/

¶ 58 *Zotero Bibliography of Electronic Literature*
www.zotero.org/groups/electronicliterature

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