

The Pleasure (and Pain) of Link Poetics
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I have followed with great interest the unfolding “cybertext” debate on *ebr*, frankly relieved that the flow of critical discourse has turned from more banal debates about electronic literature’s basic validity as an art form or its relationship to poststructuralist theory to more pragmatic questions of taxonomy and epistemology. Aarseth’s *Cybertext* will be a useful reference for years to come because it provides us a shared language to talk about the computational particularities of different types of electronic texts. Montfort’s informative review of Aarseth, which provoked reasoned responses by Hayles, Luesebrink, and Rosenberg, suffered from its Oedipal impulse to declare hypertext dead as a result of cybertext’s ascendance. *Cybertext* provides a useful terminology for the *technical* description and categorization of particular types of literature. It does not constitute a scale of aesthetic value. Hayles effectively points out Montfort’s error of elision when she asserts that electronic literature “achieves its power not only through computational operations but also through devices that have traditionally been considered literary, for example originality of expression, construction of plot, use of metaphor and tropes, and characterization through action and narrative voice.” I disagree however with Hayle’s impulse to adopt the neologism “cyber|literature” to foreground the cybertextual properties of electronic literature. Why bifurcate now?

Reading Eskelinen’s agonistic dismissal of non-ergodic theories of hypertext that prefaced his recent *ebr* contribution, “Cybertext Theory and Literary Studies, A User's

Manual” I couldn’t help but think of certain first-person shooter games that require the player to completely annihilate every creature on one “level” before moving on to the next. When Eskelinen suggests, “hypertexts should be seen as a subset of cybertexts,” he doesn’t seem to leave open the possibility that hypertexts could be seen as simultaneously belonging to many other sets as well. Theory, like literature, does not ultimately operate a world in which each passing phase obviates the other. I’m more interested in how any given theory can be generative, can help to inform writing and reading practice, than I am in which theorist is having his or her peers for breakfast.

There is a reason why I think of and value my youthful experiences of playing Galaga at the arcade, playing Zork on our family’s PC jr., role-playing Dungeons and Dragons with a group of neighborhood kids, and hopping my way through many Choose-Your-Own Adventure books, differently from the way that I recollect the first time I sat down with *Catch-22* or the summer that I made my way through *Ulysses*. If there is a defining flaw of the cybertext debate, it is a failure to take into account the “non-trivial effort” of “mere” interpretation that even lowly works of linear literature require. These crucial efforts of interpretation are further complicated by the additional constraints that cybertexts introduce into writing and reading practice.

Both Montfort and Eskelinen are enthusiastic advocates of forms that operate on a different ergodic “level” than simple hypertext. From the standpoint of a purely cybertextual analysis, Montfort’s Interactive Fiction and Eskelinen’s computer games are more complex than click-and-go hypertext. That doesn’t however make them any more or less worthy of reading, playing, or for that matter writing about. I recoil from the implicit myth of “progress” that drives any equivocation between technological

complexity and literary quality. Any given MUD is more cybertextually complex than the collected works of William Faulkner. The MUD offers community, programmability, and real-time discursive activity, the ability to interact with other intelligences in a virtual space, but it doesn't come close to delivering a virtual space as fully imagined as Yoknapatawpha County and it rarely offers a beautiful sentence. The artistic possibilities for multi-user writing environments are vast: MUDS and MOOs offer an environment for constructive and programmable, real-time discourse-driven literature¹; but the creators of these virtual worlds are still fingering at the switches. Hypertext is by no means intrinsically superior to any other form of writing, but in some ways its relative simplicity, its relatively mundane constraints, work to its advantage.

Any work of electronic literature involves some form of programming, ranging from the simple tags of HTML hypertext, to the parsers of Infocom language-derived Interactive Fiction, to the algorithmic interpolation of machine-modulated poetry, and beyond. Every program is a set of instructions, a series of constraints introduced into writing and reading practice. Each constraint poses further challenges to both the reader and the writer. Works in the genre of Interactive Fiction, for instance, often tout a "natural language interface" that is in actuality quite the reverse. Readers can supply input using only the extremely limited vocabulary that the author of the Interactive Fiction has defined and typically not revealed to the reader. Readers are asked to immerse

¹ LinguaMOO at <http://lingua.utdallas.edu/> includes some intriguing literary experiments, such as "plays" that run continually in the MOO. Each interactor in any LinguaMOO also has the ability to provide specific characterization for their MOO identity. Some artists working in electronic literature, including Mez and Alan Sondheim, focus specifically on "performance writing," literary activity that treats email, IRC, MUDs and MOOs as artistic media in their own right. John Cayley has also moved some of his programmable object poetry from *Indra's Net* into MOOspace.

themselves in a world where one may pick things up but not caress them, where one may type at but not converse with. In most works of Interactive Fiction, the very puzzle of how to communicate with the text-machine in such a way that it will agree to deliver the next fragment of story subsumes the contemplative activity of interpretation. The reader's primary charge is to decipher the code of prompts. The satisfactions of most Interactive Fictions are more akin to those of solving a riddle than to those of completing a well-written novel².

Jeff Parker's "A Poetics of the Link" refreshingly attempts to liberate the "discourse of the link" from a focus on the link as a metaphor for or a literalization of post-structuralism to a more pragmatic assessment of the link as a device in reading and writing practices. Parker's illustrations of the link as a narrative device with various potentialities from his story "A Long Wide Smile," help to establish that the link can be used as a "literary unit" in addition to as a navigational device. Parker's practical approach to the link, by "rationalizing linkage," asks writers to focus consciously on the narrative or poetic usefulness of any decision to insert a link into their creative work.

In her response to Montfort, Luesebrink notes that "it is not the *computational function* of the link that constitutes the literary value—the link is just a device." From the perspective of a writer trying to tell a tale, to create a coherent and/or meaningful experience for the reader, the link has both what Parker refers to as its "joys" and its drawbacks as a literary device. I'm interested in exploring some of those drawbacks here, not to discourage the use of hypertext in narrative, but to underscore Parker's implicit

² Hats off to Nick Montfort for his efforts to create IF works, such as his *Winchester's Nightmare* and *Ad Verbum* that do use these riddling constraints to particularly literary ends.

warning to creative writers to think very carefully about the poetic purpose of any moment of linkage. I want to interrogate some of my own writerly anxieties about how the link functions in hypertext fiction. The apparent simplicity of the link belies its complexity, both as an unstable grammatical unit and as an intrusion on typical literary reading practice.

I'd like here to pull back a poetic level from the differentiation between typologies of links that convey literary effect, such as Parker's Emotive, Lateral, Complicating, Temporal, and Portal Links, or poetic uses of the link that I've referred to in a different context³ as Referential, Line Break/Double Entendre, Point of View Shifting, Comic Subversion, and Chronological, to focus first on how the link affects reading practice on a more granular level. Because the potential uses of the link are multiple and subjective, dependant on both the author's intention and the software in which the link is produced, it may be useful to start with a common definition of the link. Here goes:

The link, in any hypertext system, is a piece of text or any other media object that the reader may activate⁴. The reader's activation of the link "calls" another

³ An informal response to an Online Writing Group discussion of the link posted January 6, 1999 and integrated into *The Unknown* @ <http://www.unknownhypertext.com/owlhypertext.htm>

⁴ Links are typically activated with a mouse click, although many other forms of link activation are in use (i.e. mouseover, stylus movement, voice activation). Landow, Hayles, Aarseth and others have pointed out that this process of linking is not inherently electronic and that hypertexts exist in many print forms. In a print hypertext such as Cortazar's *Hopscotch*, a reader can activate a link by turning to a page specified by the linking device, which can be something as simple as the alternative reading order in *Hopscotch*, or the simple links, "blatant" in Parker's terminology, of Choose-Your-Own-Adventure books.

text, media object, or programmed aspect of the work that in some way changes the text⁵ delivered by the computer and/or network to the reader's screen.

Parker's distinction between "functional" and "literary effect" links is problematic because all links are functional in the above-noted way⁶. The notion of "literary effect" also has its difficulties when moved from the plane of the author's intention to that of the reader's interpretation. The creative writer should *try* to think deterministically of the literary effect of linking, but the intended literary effect will more often than not differ from the consequence that the selection of the link has on the reader's experience. Parker invokes Harpold's notion of "the gap," which bears further examination. The gap is both a physical manifestation of change—the in-between moment of the text after the activation of a link and before the text replacing it has loaded—and a communicative gap between the writer's intended literary effect and the reader's reception. As Moulthrop notes:

In traversing a semantic space, the link by implication spans or contains that space, if not in its infinite totality then with a kind of cognitive blank check for which there can never be sufficient discursive funds. Links like words may be "brokers" of meaning, but they are not honest brokers. As a divingboard into darkness, the link from "space" to the saucer cult invites us to consider an enormous range of possible destinations—from Hubble photography to differential topology to Gene Roddenberry's "final frontier." Yet only one possibility is realized, and likely as not it will not be what the reader anticipated.

⁵ Text read here in the widest sense of the word, potentially including image, sound, animation and aspects of interface design.

⁶ Even the "404 Errors" generated by broken Web links change the surface of the reading experience, albeit in a generally negative way.

While Parker accurately states that the link is from the writer's perspective a useful tool to use cunningly and carefully, his assumption that "a link in a hypertext is, from a reader's perspective, a whole new literary joy" strikes me as overly optimistic. This gap of meaning between the writer's intention and the reader's experience is a space of blind negotiation. It is a space of frustration as well as one of play.

Readers don't always react well to a subversion of their expectations. Back in the day, when William Gillespie and I were enrolled in David Foster Wallace's M.A. fiction writing workshop at Illinois State University, which at the time was chock-full of eager young postmodernists striving to subvert the work of their forbearers, our discussion often circled back to the ideas not to familiar workshop dictums about showing vs. telling, but to the problem of "showing off," and in the process "telling off" the reader. When we youngsters utilized techniques such as nonlinear narrative, disruptive shifts of discourse style mid-story, radical deconstruction of givens of traditional storytelling such as plot, character and setting etc., Wallace usually reacted in a surprisingly negative, surprisingly conservative way⁷. Wallace chided us not for writing against the grain of mainstream fiction, but for failing to take into adequate consideration the "pay off" of the *work*, the "non-trivial effort" that these stories required of the reader. Unconventional writing techniques of any kind constitute a challenge to the reader to surmount the difficulties presented by the text, and also an implicit promise that there will be a moment of satisfaction on the other side of the necessary labor.

The link in hypertext represents a similar type of confrontation between the author, the text, and the reader. Poorly chosen links, links that don't "work," that don't "pay off"

⁷ Surprising because his own works, such as *Infinite Jest*, *Girl With Curious Hair*, and *Broom of the System* are masterfully guilty of these pleasurable sins.

the reader, are those that fail to meet the reader's expectation for a sense of connection, a sense of causality, or to subvert those expectations in a decipherable way. The reader of the hypertext is not only reading the text, but also the intentions of the linking strategy.

Contrary to the assertions of much of its early theory, hypertext doesn't necessarily liberate the reader as much as it changes the relationship between reader, writer, and text. Readers navigate a given text differently, but in the "explorative"⁸ hypertext, the reader's ability to choose links to follow doesn't in actuality free readers from the designs of the text's author. In effect, the reader is simply given a different but nonetheless finite set of choices. In *Cybertext*, Espen Aarseth notes that most hypertexts actually limit a reader's choices more than the book, which is a "random access" device—the technology of the codex does not require the reader to start at given page or read in any particular order. Aarseth's claim is factually accurate, although it fails to acknowledge that readers do the majority of their reading according to a learned set of behaviors. When mystery readers skip to the last page to find out whodunit before finishing the book, they are consciously "cheating," operating against the implicit code of mystery-reading behavior. The implicit code of reading most types of fiction in codex book format favors starting at the first page and moving to the last. Hypertext readers rarely have such a developed implicit code of behavior to react with or against.

A Storyspace hypertext generally provides the reader with choices to move from any given lexia only to those other lexias the author has linked. The link in any case is a predetermined avenue of navigation. Whether the link has been directly chosen by the

⁸ Michael Joyce distinguishes between "explorative" and "constructive" hypertext – "explorative" hypertext limits the reader to the navigation of a static text via author-selected links while "constructive" hypertext enables readers to add links and new lexia to the system.

author, randomly determined by the computer, or determined by navigational choices that the reader has made previously⁹, the reader's agency is always limited to an arbitrary binary choice—"to click or not to click." Noted electronic literature author John Cayley stated in a recent interview that he was uncomfortable with the term "interactive" as it is commonly used to describe writing for programmable network environments. Cayley explained that most works of e-lit are not interactive, but "transactional." The computer delivers output in response to the reader's input of the click. The reader is actually making only simple choices about the operation of the text, not eliciting a personalized response from the text or its authors, and not interactively manipulating the work. We transact with the text; we don't have a dialogue with it.

The link is a constraint in the reading process, and in effect a technology of control, rather than one of liberation. While the link enables the reader to make choices that determine how a given text is navigated, the reader does not determine what those choices will be. The limits are imposed by the author and by the program. The text is not "constructed" by the reader, but is rather "navigated" by the reader. The text is structured by the reader's binary transactions with the hypertext. The text itself functions according to a set of rules determined by the author within the constraints of the program and the interface used to create and deliver the text.

To argue that the link is inherently a constraint, rather than a liberatory device, is not however to say that the reader of any text, in print or electronic format, isn't already "liberated." The process of making meaning from a given experience, the act of

⁹ The "guard fields" of Storyspace software and the "conditional links" of Rob Kendall's Wordcircuits Connections Muse allow for a given link to vary in its effect on the basis of whether or not the reader has visited certain other lexia.

interpretation, occurs within the reader's subjective experience. Neither the author nor the text-machine can determine this subjective meaning. The constraint of the link opens a new space of negotiation. While the reader on one level is processing of a given "surface" level of text (i.e. following the linear progression of events in a particular "episode" "scene" or "lexia" in a hypertext fiction), the link to an extent interrupts that cycle of thought, presenting the reader not only with the questions of the surface text: for example "what is happening within this section of imagined world? How does this part of the story relate with the others I've read before?" but also with the questions of the linked text: for example "what will my selection of this link reveal about the section of text I'm reading?" or "will clicking on this link lead me to a more interesting story than the one I'm reading?" or "what am I missing if I don't click?"

Most uses of the link in hypertext narrative tend to work against the kind of developed contemplative storytelling that many of its authors have been trained to appreciate and emulate. No sooner is a reader delivered to a scene or episode than tempted to the egress. Keith Gessen, writing for the somewhat aesthetically conservative audience of *The New Republic*, notes specifically of some links in *The Unknown*:

These links have the effect of destabilizing the sentence, collapsing its surface, and making it difficult to finish. And yet the *raison d'être* of the Web, both in its utopian and capitalist manifestations, is the click; to resist the click is to resist the Web itself. And who would want to do a thing like that?

Gessen's observation, painful as it is to me as the very author-unit who chose to insert the links in question to acknowledge, points to another complication creative writers must

consider in constructing a hypertext fiction. The link is an entrance, but also an exit. The link is a kind of exotic forbidden fruit hung temptingly from a branch smack dab in the middle of the reader's current chosen path. The link confronts the reader, distracting from the story at hand, and seductively hinting at the unknown potentiality of the next.

The hypertext novel that William Gillespie, Frank Marquardt, Dirk Stratton, and I co-authored, *The Unknown*, is an encyclopedic hypertext novel about a book tour. *The Unknown* bears strong and intentional resemblance to print works in the picaresque tradition, such as Chaucer's *Canterbury Tales*, Swift's *Gulliver's Travels*, and Voltaire's *Candide*. *The Unknown* is an ambitious comedy that includes hundreds of different "scenes," and parodies multifarious forms of discourse. While each scene is part of the larger narrative, we decided early in the writing process that our measure of the success or failure of any given scene would necessarily be how well it functioned individually, outside of the context of the work as a whole. Since we offer our readers so many means of navigation, so many opportunities to enter and exit a scene at whim, every scene strives to be both a part of a larger whole but more importantly an enclosed, pleasurable reading experience in its own right. Successful scenes in effect work against the links within the text by driving the reader to complete the scene in its entirety before linking. Not all of the scenes in the novel do work in this way, but that was our intention.

One of the distinguishing features of *The Unknown* project has been our attempt to present the work not only as an online experience meant to be experienced by the solitary reader in isolation, but also as live performance¹⁰ in "meatspace." To that end, we have gone on several "tours," and presented the work in many venues, ranging from backyard

¹⁰ See Montfort, Keller and Schumate for reviews of *The Unknown* in live performance.

barbeques and Chicago taverns to more formal settings such as the DAC, MLA, AWP, and Hypertext conferences. Our performance is meant to mimic the transactions of the hypertext novel reading experience in this fashion: we typically begin the performance en medias res with a scene that is somehow related specifically to the site in which we are performing the work¹¹. Prior to beginning the reading however, we let the audience know that they themselves have explicit permission to interrupt us, to shout out if they want to follow a link. At every link in the reading, we ring a Pavlovian call bell, a reminder to the audience of their flickering moment of agency. When an audience member shouts out a link, we stop reading, follow the link, switch readers, and start the new scene. Of course, this puts us in an uncomfortable position as authors. On one hand, we want the audience to engage in this transactional behavior, and to instruct us down a path which we otherwise would not have chosen to follow; but on the other hand, we feel affection for the scenes as they were individually written, and feel a natural authorial desire to read at least some of them in their entirety. The choosing audience almost invariably favors the interactivity of disruption, the speed of transformation, over the pleasure of closure, even of individual scenes.

After the reading, we typically hear two different reactions from members of the audience—someone will come over to tell us how exhilarating it was to be able to react, to control and subvert our “authoritative” reading—and someone else will come up and tell us how frustrating it was that other audience members could not resist the urge to link, preventing us from finishing a particular scene. These two reactions to the live readings

¹¹ For instance, at the DAC 1999 conference at Georgia Tech University, we began the reading with the Atlanta scene in which we parody media mogul Ted Turner <atlanta.htm>, and at a New York reading whose audience included Barney Rosset, I started with the Henry Miller scene <parismiller.htm> by way of tribute.

of *The Unknown* have shaped the way that I think about linking in general. The link is likely pay off for the reader who favors the radical speed and dramatic shifts of hypertext, who focuses on the poetic moment of linkage, but it is however also likely to frustrate the more traditional, and in some ways more patient reader, who takes pleasure in the “tyranny of the author,” and in reading as a contemplative act¹². How does one write a story that satisfies both types of readers? The tension between the two conflicting desires for movement and for contemplation is in a way the central problem of hypertext literature.

Hypertext authors should be no less immune to concern about their how their audience will react to a give aesthetic choice than any author of print literature. While most of electronic literature’s potential audience has developed hypertextual reading strategies from the experience of surfing the Web, *literary hypertext reading* is a behavior yet in development. Most of the content of the commercial World Wide Web is intentionally designed for readers to *skim* and glean information in brief spans of time. Many of the same readers who will blurt out that they “can’t read off of a screen,” when they hear mention of electronic literature have in fact already resituated “non-literary” reading and writing habits, such as keeping abreast of breaking news and corresponding with their peers, onto the network. Literature however, in both its printed and electronic forms, generally privileges contemplation. The challenge for the hypertext author is

¹² Through analysis of log files and through correspondence with some of the most devoted fans of *The Unknown*, we’ve learned that while most of our readership is of the impatient variety that flings rapidly from scene to scene, rarely finishing an entire scene, those “repeat visitors” who read the work in more depth tend to slow down, to choose links after reading entire scenes, as their reading of the work progresses.

create work that offers readers both satisfactory poetic performativity¹³ in linking and the contemplative satisfaction of processing the poem or story as a gestalt, as an “immersive” reading experience. A completely successful hypertext would appeal both to readers interested in the intentional puzzles of linkage, the pleasures of transaction, as well as to readers for whom the link is secondary to the pleasures of the text as a holistic contemplative experience.

I’ll make one further observation about linking: McLuhan’s dictum that the medium is the message applies to linking as well. The medium itself comes laden with constraints on writing and reading practices. The particularity of the linking experience is determined not only by the writer’s and reader’s choices but also by the software and hardware that mediate the writing and reading experiences. The different technologies of linking—the actual programs in which a given hypertext is authored and read—shape and inform the experiences of writing and reading the finished literary work. A link in a print hypertext is different from a link in a Storyspace hypertext is different from a link in an HTML hypertext is different from a link in a Quicktime hypertext is different from a link in a Flash hypertext. Each technology has its own limits and capabilities. Links in Web-based hyperfictions are further complicated by their very situatedness on the network. Web links don’t even necessarily refer to a text that is “inside” the domain of the hypertext itself. The link confronts the reader with an exit to *anywhere*.

¹³ Rita Raley distinguishes digital from analog hypertext by stressing the performativity of the digital: “both operator and machinic processor are crucial components of the performance of the system. The performance that encompasses user and the machinic system is an interactive one and to some degree collaborative. Further, this performance collapses processing and product, ends and means, input and output, within a system of ‘making’ that is both complex and urgent.”

I think that Parker's characterization of the use of the link in early Eastgate hypertexts as being of the "static, associative kind" is unfair. To say this is to fail to acknowledge that the Storyspace authoring environment of hypertexts of note, such as Michael Joyce's *Afternoon*, Stuart Moulthrop's *Victory Garden*, and Shelley Jackson's *Patchwork Girl*, makes use of a different type of linking technology than that utilized by most authors of second-wave hypertext literature, who typically author in HTML. In Joyce's *Afternoon*, the use of the link is specific to his high modernist project of emotive indeterminacy. The reader's experience of confusion, of having to revisit and cycle through sections of the text before reaching "central" components of the story that reveal more clearly the tragic circumstances of the protagonist's car crash, is meant to mimic the distraught and fractured mentality of the narrator.

In his *ebr* riposte to Montfort, Rosenberg points out "you will find a great deal of the research in hypertext is going into spatial hypertext." Both *Victory Garden* and *Patchwork Girl* make use of Storyspace's particular conceptualization of the link as a spatial metaphor¹⁴. In most Storyspace hypertexts, the metaphor of moving through spaces is visual as well as textual. Any given lexia is "embodied" in a map of the work as a whole. The particularities of the Storyspace software seem to have informed an aesthetic that privileged text-as-image. For instance, one of Robert Arellano's early hypertext works that involved the history of the bicycle was actually "shaped" in the Storyspace interface like a bicycle. In the "crazy quilt" section of Shelley Jackson's *Patchwork Girl*, the text itself is visualized and structured as a multicolored quilt. This type of hypertext structure utilizes the link for visual structuring as well as semantic

¹⁴ In the Storyspace program, authors write in lexia that are assembled in a diagrammatic "map," which most Eastgate authors make available to the reader of the finished text.

effect. Most Web hypertexts, including “A Long Wide Smile” and *The Unknown* focus more exclusively on the link as a semantic, conceptual device¹⁵.

Links in Storyspace hypertexts might seem more awkward than links in HTML hypertexts¹⁶. Accessing the different parts of the link interface requires some extra clicking and keystroking unnecessary in HTML hypertexts. The link in these works, however, is certainly no “dumber” or more static than links in HTML works. In fact, in addition to having an accessible visual representation, the link in Storyspace can be conditioned and programmed in ways that the basic HTML link cannot.

Parker and others might be forgiven their derision for the Storyspace software and the “inmates of the Eastgate school,” as its publisher, Eastgate Systems¹⁷, often takes a similarly derisive stance to Web-based hypertext. For instance in Eastgate’s “Web Reading Room,” of sponsored Web projects, the publisher laments that the “limitations of the Web are considerable—especially the difficulty of adapting a Web hypertext to respond to each individual reader, something Storyspace writers (and many others) take for granted.” Eastgate’s statement here falsely suggests that its hypertexts are somehow interactive in a way that web hypertexts are not. The “response” to the individual reader that Storyspace enables consists of another set of constraints on reading practice. The

¹⁵ *The Unknown* and Robert Arellano’s online hypertext novel *Sunshine 69* both include maps as navigational metaphors that readers can use to access certain parts of the story. The map in Storyspace hypertexts is however intrinsic to the text itself, an *a priori* part of the writing process.

¹⁶ In his comments on the 2001 Electronic Literature Awards, for instance, Fiction Judge Larry McCaffery made honorable mention of *Patchwork Girl*. He praises its “wondrously written and perfectly conceived match of form and content” despite its “somewhat cumbersome reliance on Storyspace software.”

¹⁷ See Swiss for a close reading of Eastgate Systems’ confused brand identity, which conflates elitism with the avant-garde, and literary publishing with selling proprietary software.

writer, using “guard fields” can restrict access to certain parts of the work for readers who have not done the necessary work to get to those sections. The program also tracks the reader’s progress through the text, so that readers can pick up where they left off. The reader’s ballyhooed interactivity here consists essentially of the ability to bookmark a page, and perhaps the satisfaction of clicking around long enough to reach the “gated” texts denied to the less persistent reader.

How magazine reports that the discussion leading up to the database redesign of *ebr* was guided by the idea of using hypertext to enable its readers and writers to act as literary deejays: “Play the links like a musical instrument. A personal Re-Mix. An Academic Re-Mix. Guest Re-Mixes. Mix-It Yourself.” As we make our stuttering efforts towards describing the language of electronic literature, this appropriation of the discourse of musical culture seems particularly apt¹⁸. The computer is an instrument for the artist, who “arranges” a work of electronic literature within the scale of constraints established by the machine and the software. That interaction in turn produces another instrument, the arranged work of electronic literature, which the reader then “plays” to produce a particular reading of the work itself. Even the introduction of the simple link into this literary instrument produces more “notes” that the composer must figure out how to arrange, and that the reader must figure out how to play. A hypertext novel, with its simple links, might map metaphorically to a relatively simple instrument, such as a flute or a guitar, while a VRML MOO complete with programmed AI avatars might map to something more along the lines of a pipe organ. Symphonies will be written, but before

¹⁸ John Cayley also makes use of the instrument analogy to describe the performative nature of his writing for programmable network environments. See WBEZ interview.

they are realized both writers and readers will need to figure out how to work with the many new instruments at hand.

The simple functionality of the link in most Web-based hypertexts probably works to the advantage of hypertext authors who want to reach a wider audience than those able to access the proprietary code of Storyspace¹⁹. The HTML link is not necessarily a better technology than that of Storyspace but is a more accessible one²⁰. The linking technology in simple HTML hypertext benefits not from its inherent complexity but instead from its culturally situated *familiarity*. Readers understand implicitly the basic concept of the link as a connection between one virtual space and another. The Web has by now been around long enough that the “general reader” of the medium is familiar with the three states and basic function of the HTML link. This familiarity, this training in a cultural practice of reading, helps to curb some of the contempt many readers exhibit when first experiencing hypertext’s barbaric incursion into the much-treasured, closely-held domains of fiction and poetry.

¹⁹ Eastgate’s failure to reach a mass audience can be partially attributed to simple economics. Many Eastgate hypertexts cost more than a hardcover book or a two-CD music release. At this writing, Eastgate’s newest titles list for \$25 per CD-ROM. Its authoring system runs \$295 a license. Eastgate’s competition consists of all of the individual artists who distribute their work for **free** on the Web. Neither the restricted readership offered by Eastgate nor the free-for-everyone distribution models of the Web present ideal options for authors. Most authors, at this early stage of the field’s development, are however favoring the huge potential audience of the Web over the imprimatur of publishing with Eastgate. There’s a strange inversion here: the “amateur” who goes it alone can typically reach a wider and more diverse readership than the “professional” who takes the more credentialed route. Neither of the two is likely to get a great deal in the way of direct fiscal remuneration for producing electronic literature.

²⁰ The history of media is replete with examples of “superior” technologies overcome by those that are simply more accessible, for instance the VHS over the Betamax format in video, and most recently MP3 over higher-fidelity digital audio formats.

Some Technically Inventive Approaches to Linking

I include here some examples of hypertexts in which the technology of linking itself is reconsidered. In these cases, the technological choices the authors make about the nature of the link influence the poetic effect of the reader's transaction with it.

Blais, Joline, Keith Frank and Jon Ippolito. *Fair e-Tales* (1999)

<http://www.three.org/fairetales/>

In retelling the stories of Cinderella, Little Red Riding Hood, and Rapunzel, the link functions as a point-of-view shifting device within three inventive javascript interfaces.

Cayley, John with Douglas Cape, Wills Morgan, Giles Perring, James Waite and Alex Warwick. *What We Will* (2001)

<http://www.z360.com/what>

John Cayley's recent "interactive drama" collaboration *What We Will* utilizes the potential of QuickTime interactive movie formats, particularly its photographic panoramas. This is combined with binaural recording in the field and composed soundscapes, which are embedded in the navigable movies. The reader activates links by moving through panoramic photographs and clicking on objects within them.

Kendall, Robert. *Clues* (2001-Beta Version)

<http://www.wordcircuits.com/clues>

Kendall's *Clues* urges you to "Play the words. Crack the text. Win the game." This is one of the first projects to make extensive use of the Wordcircuits Connections Muse developed by Kendall and Jean-Hugues Réty. Connection Muse adds dynamic functionality to HTML texts through a system that tracks the reader's progress and responds on the fly to changing conditions. It also lets the author create components within the hypertext—paths and sets of nodes—and manipulate these as objects with extractable properties.

Moulthrop, Stuart. *Hegeriascope* (1997) published in *New River* Volume 3.

<http://raven.ubalt.edu/staff/moulthrop/hypertexts/HGS/>

In *Hegeriascope*, the reader is offered four links per page. The link is recontextualized, however, by the fact that the hypertext is pushing a new page every thirty seconds. If the reader doesn't select a link, the hypertext will push the reader to another place in the text. The result is a kind of forced urgency to the process of choosing links.

Morrissey, Judd with Lori Talley. "The Jew's Daughter" (2000)

<http://www.thejewdaughter.com>

"The Jew's Daughter" *references* the traditional idea of the link, with a single blue word on the page. When the reader mouses over the link, however, the page changes of its own accord. The page does not reload or "turn" but instead part of the text on the single page is seamlessly replaced, and the story proceeds in a shifting, fragmentary but ultimately linear way.

Rettberg, Scott. "The Meddlesome Passenger" Illustrations by Shelley Jackson. (2001-Beta Version)

<http://www.revisesite.com/art/passenger>

In the "Meddlesome Passenger," links serve to launch paratexts that comment on and against the central text. The paratexts "speak," cycle, fade in and fade out, purposefully confronting the reader with their kinetic presence against the relative fixity of the main segments of the fiction. The paratexts underscore the story's principal focus on a dead author who refuses to be silenced.

Sapnar, Megan (Designer). "Pushkin Translation" (2000) Written by Aleksandr Pushkin. Translated from Russian by Dmitry Brill.

<http://www.poemsthatgo.com/gallery/index.htm>

Some forms of linkage, such of those in Flash, Shockwave, and Quicktime, accomplish links through the interface itself. In this piece, the reader moves a small window over the Russian version of a poem to see the English version while hearing the Russian. The "linking" here is accomplished by moving a part of the Flash interface.

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