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Judy Malloy's Seat at the (Database) Table: A Feminist Reception History of Early Hypertext Literature

Kathi Inman Berens
Portland State University, kberens@pdx.edu

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Kathi Inman Berens

Annenberg School of Communication, University of Southern California, Los Angeles, CA, USA

Correspondence:
Kathi Inman Berens,
Annenberg School of
Communication, University
of Southern California, Los
Angeles, CA, USA.
Email:
kathiberens@gmail.com

Abstract

When Robert Coover anointed Michael Joyce the 'granddaddy' of hypertext literature in a 1992 *New York Times* article, it could scarcely have been imagined that this pronouncement would come to define the origin of electronic literature. This short article examines the human and machinic operations obscuring Judy Malloy's *Uncle Roger*, a hypertext that predates afternoon. Malloy's reputation was stunted because *Uncle Roger* was algorithmically invisible, a factor that became increasingly important as the Web's commercial capacities matured. *afternoon*'s endurance can be traced to its ISBN, which made *afternoon* easy for readers to find and united disparate stewards in preserving access to this work. Malloy's programming expertise and the goodwill among hypertext authors were insufficient to protect her against sexist exclusions that, in aggregate, fostered enduring disequilibria. While some male pioneers of hypertext are now full professors, Malloy and other early female hypertext pioneers are adjuncts or are otherwise at a remove from the academic power base. Ironically, Judy Malloy's papers—13,200 items, 15.6 linear feet—are collected at Duke University's Rubenstein Library, but Judy herself still seeks sustained academic employment. This gesture is read in the context of pursuing the digital humanities 'for love' in a higher education environment that's increasingly neoliberal in its financial allegiances.

Before I read Jill Walker Rettberg's (2012) excellent 'Electronic Literature Seen From a Distance: The Beginnings of a Field', I'd suspected that Judy Malloy's elision from the electronic literature reception history as the first author of hypertext fiction was attributable to genre. Her comic piece *Uncle Roger*, a romp through Silicon Valley set in then-present day 1986, did not evince the seriousness, ambiguity, and intricate plotting that critics and other purveyors of taste associate with high art. I accepted without question Robert Coover's (1992) declaration of Michael Joyce's *afternoon, a story* as the 'granddaddy of full-length hypertext fictions',[1] even though Malloy's *Uncle Roger* predates Joyce's *afternoon* by at least 1 year and possibly 3 years, if one measures from *afternoon*'s publication date (1990) rather than its introduction to the coterie of enthusiasts who exchanged stories authored on Hypercard and other systems.

Afternoon is a magnificent work that merits its august reputation.

But Rettberg traces the far-reaching implications of Joyce's reputation in her distant reading, which demonstrates that *afternoon* is far and away the

most cited and taught work of electronic literature, three times more likely to be cited than the second-most cited work (*Patchwork Girl*), and an order of magnitude above the rest.[2] The status Coover conferred on *afternoon* in his *New York Times* review became a self-fulfilling prophecy. It is such a small thing, just one sentence in the *Times*, but its impact has been field-defining. Several factors converged to anoint Michael Joyce and submerge Judy Malloy; machinic and human procedures collaborated, largely without human agency attributable to any particular person, to create conditions that made it less likely Judy Malloy and other female electronic literary authors would thrive.

Individual actors like Joyce, Malloy, and Stuart Moulthrop—all of them pioneers of hypertext in the late 1980s and early 1990s—evinced companionable interest in each other's work. But the database systems by which that work was shared, discussed, and preserved, or NOT shared, discussed, and preserved, bear the traces of human cultural values and biases. Michael Joyce's fame and Judy Malloy's relative obscurity are products of dialectics of inclusion and exclusion that replicate the traditional privileges that digital media have the capacity to disrupt but often do not. As a tool for broadening the social histories of literary production and reception, distant reading evocatively visualizes nodes, lines of filiation, and edges of writers' groups. When the primary data are encoded to factor in gender, they can reveal previously invisible work performed by women that traditional narrative histories of those groups can obscure. Rebecca Sutton Koeser and Brian Croxall's 'Networking the Belfast Group', for example, graphs the flow of communication among the Belfast Group of poets working in the 1960s. Koeser, the lead developer of this project, discovered that women played a central role in the group's communication and social evolution, not a subordinate one as previously thought. I should add that in the poster session at the Digital Humanities Conference where Koeser and I discussed this project, I derived the impression that she was not specifically aiming to map gendered patterns of network action, but one emerged as she visualized the data. Other projects visualizing networks of literary production and reception, such as Hilde

Higgenboom's quantified history of popular and sentimental novels authored by continental women, interrupt received notions of gender and canon formation that Moretti's distant readings might leave uninterrogated.[3]

Gender blindnesses may be unintentional, but lack of intentionality does not limit their harm. As a means of conveying this, the science fiction writer John Scalzi (2012) redescribes white male privilege as a role playing game:

> How to get across the ideas bound up in the word 'privilege', in a way that your average straight white man will get without freaking out about it? Being a white guy who likes women, here's how I would do it: Okay: In the role playing game known as The Real World, 'Straight White Male' is the lowest difficulty setting there is. This means that the default behaviors for almost all the non-player characters in the game are easier on you than they would be otherwise. The default barriers for completions of quests are lower. Your leveling-up thresholds come more quickly. You automatically gain entry to some parts of the map that others have to work for. The game is easier to play, automatically, and when you need help, by default it's easier to get.

Scalzi playfully appropriates game mechanics to prompt realization of how sexism can happen without malice or even intention. The 'privileged' white male player does not engage the game seeking to deprive others of advantage, but advantage bolsters him nevertheless. Stuart Moulthrop describes how at the 1989 Hypertext conference he, John McDaid, Michael Joyce, and Jay Bolter sat at a computer connected to the Internet and searched for other people doing similar things. They found Judy Malloy's work:

> It was just like blues men going to each other's performances. Yeah, allright, oh darn that's good. Oh, we're not that good. So we really recognized that she was somebody, and she was part of a community out there in the Bay Area that was really important and exciting. I can remember coming away from that

moment thinking that, you know, there might be a real hope for what we were trying to do because other people were doing it. (Moulthrop, personal interview with Jill Walker Rettberg, cited in 'Beginnings').

Michael Joyce, Stuart Moulthrop, and many of the men in the e-literature community are feminist supporters who individually act to redress power imbalances when brought to their attention. Joyce and Moulthrop are tenured full professors at Vassar College and the University of Wisconsin at Milwaukee, respectively. None of the pioneering e-literature women authors I have met occupy the tenured—or even full time—positions that their male colleagues earned. The respect male practitioners expressed publicly for their female contemporaries was insufficient to confer some of their 'advantage' to the women in ways that materially improved those women's individual engagements with prestige-and-job granting institutions. 'I had the privilege of inhabiting the Tech(No)Culture bitnet listserv from 1988 on', Kali Tal commented on the blog version of my DH 2013 conference paper.

The interesting thing is that Michael Joyce & Stuart Moulthrop did speak in admiring terms about Judy Malloy's work, and that few picked up on it. Mark Bernstein, who wrote Storyspace and Tinderbox, set about to publish the work of a lot of the early women hypertext writers at Eastgate (eastgate.com) and promoted them just as energetically as he promoted the men. (I remember him encouraging me when I was thinking about writing a hypertext (though I never did do it). He's responsible for bringing the work of many of these talented women to public attention.

Why did not the support of the preeminent publisher and some of the most respected male artists lead to increased academic and literary opportunities for women writers of hypertext?

'I was holed up in my basement on the Albany-Berkeley border', Judy Malloy wrote of her life in 1993, 'scraping out a living on the fringes of the Internet'.[4] Other pioneers taught ~~comp~~ at

community college, worked government jobs or in Web services, built media programs, and took itinerant jobs as temporary teachers. The Wikipedia entry about poet Stephanie Strickland, winner of several literary prizes, lists her remarkable publication record, educational background, and critical reception, but keeps silent about paid work except for 1 year, 2002, when she held the McEver Chair in Writing at the Georgia Institute of Technology. Just one decade later, in the early 2000s, women e-literature artists made in-roads to university power. Caitlin Fisher and Dene Grigar direct their own programs at R-1 universities, York and Washington State–Vancouver, respectively. Women of e-literature's first generation were not encouraged to enroll in graduate programs; even when some obtained advanced degrees, opportunities mostly bypassed them and opened for the men in their cohort and for the women who came after them. The specific causes of this phenomenon are not known.

In his 2012 book *The Interface Effect*, Alexander Galloway glosses Lev Manovich's *Language of New Media*: 'to mediate is really to interface. Mediation in general is just repetition in particular, and thus the ''new'' media are really just the artifacts and traces of the past coming to appear in an ever-expanding present' (p. 10). Literary history always reflects back an uncanny distortion of one's own cultural moment, and here's ours: among the proliferation of tools and brilliant ways of doing new work surfacing almost daily in my social media feeds, I hear also—resonating in the back of my mind—Miriam Posner's feminist caveat 'Some Things To Think About Before You Exhort Everybody To Code':

> The point is, women aren't [learning to code]. And neither, for that matter, are people of color. And unless you believe (and you don't, do you?) that some biological explanation prevents us from excelling at programming, then you must see that there is a structural problem.

Posner's post about today's 'early-career women involved in digital humanities projects' represents them as surmising they must learn how to code in order to mark themselves as 'a real digital humanist'. This is a Gallowayean 'repetition in

particular' that remediates similar dynamics that beset female hypertext pioneers. Judy Malloy's 'cred' was established in part by being almost entirely a self-taught programmer.[5] More specifically, she's a conceptual artist who dreamed up the idea of molecular storytelling while working with books she made from card catalogs in 1977. Later, as a single mom, she supported herself and her son by working with technical information, including jobs as a technical librarian and a library assistant for several research and technical companies. On the WELL, in 1986, she saw in the Art Com Electric Network bulletin board database a much more efficient mode of non-sequential storytelling than the card catalogs. She ended up writing 32 UNIX shells and built in a Boolean operator ('and'). She built this authoring system so that she could perform 'live writing', a 'Homeric' experience she likens to Twitter today. Extending Posner's point about women and code, even Judy's undisputed programming proficiency did not insulate her against sexism. Nor did the goodwill and respect from the other practitioners in her community. Malloy's fate to remain on the fringes of academic culture is not unique to her. It happened also to the other women in her cohort and many more whose names are lost to a history now inaccessible because not algorithmically visible.[6] This is a human problem without a tool solution. But it is possible that mindful use of tools could ameliorate the problem this reception history discloses.

There is no villain twirling his moustache in this story. But there are cases of parallel artistic achievement that were rewarded unevenly in the academic system, which over time resulted in career outcomes that bluntly reinscribe sexism's male privilege. Even in 'disembodied' code and virtual environments, sexism seems inextricable from the output such code produces. The 2014 Critical Code Studies Working Group convened by Mark C. Marino and Jeremy Douglass directly took up the challenge to examine executable code for traces of human bias.[7] These richly conversational and detailed posts (featuring Judy Malloy, among many others) will be published as complete threads in *ebr* (*electronic book review*).

afternoon's ISBN and *Uncle Roger*'s lack of one is the crucial differentiator in Malloy's and Joyce's divergent receptions. Algorithmically, *Uncle Roger* was invisible to people outside the WELL; *afternoon* was the first hypertext novel to be distributed with an ISBN. Bernstein even packaged the discs in cardboard containers that looked and felt in the hand like a book; he set prices in the manner of any small press, which resulted in Eastgate's authors being among the very few electronic literature authors who have made money selling their works.[8] The presence or absence of an ISBN determined access: whether a work could be archived, collected, and sold. The ISBN united disparate stewards (programmers/developers, librarians, academics, vendors) to collect and fortify those few works against bit-rot or obsolescence. The vast majority of early electronic literature not published by Eastgate Systems lacked an ISBN; those works were entirely the responsibility of the authors to maintain or abandon.

While it circulated on the prestigious museum and gallery scene from 1987–89, *Uncle Roger* excited interest in the popular (print) press, but with very few exceptions, its notice is today buried, algorithmically invisible. It was singled out in the Centennial Edition of the *Wall Street Journal* (published on 23 June 1989), and mentioned in *Newsweek*. It would be much later (1997) before Malloy would author *Uncle Roger* in a browser-friendly format. By then excitement for the novelty of hypertext had given way to interest in Flash-based works. A moment had passed and with it, the power that comes from cultural currency.

'If there has been a conceptual turn at all in electronic literature in the last decade', Rita Raley observed in 2012,

> my suggestion is that is has been from the lamentation, celebration and critique of . . . human and machine coupled in a terminal embrace . . . to an articulation of Systems writ large: matrices of interconnected nodes, entities, bodies, devices that are as much about the nodes themselves as they are about the flows among them: matrices, then, that are at once mediated and lively.

'Mediated, lively' and ephemeral. *Uncle Roger*, a performance for a specific audience, was distributed in

chunks of non-linear story weekly, and people responded occasionally with comments. It was dialogic: it changed in response to input from its audience. *afternoon*, by contrast, was a book-like object meant to be read in solitude, like a print novel but computational: the reader wrapped in Raley's 'terminal embrace'.

These very different designs of reader experience—the one ephemeral, the other enduring—disclose two particular challenges to the formation of an electronic literature canon. First: how to catalog reading events that perform ephemerally but leave digital traces?[9] Second: how to form a canon when access to those works is constricted by bit-rot and obsolescence? Only a tiny fraction of early hypertext works have been adapted to run on current operating systems.[10]

Scott Rettberg (2014) wonders whether the concept of a canon should pertain to electronic literature. 'If traditional literary canons are intended to select out, highlight and mark for historical preservation certain printed literary works, do we even think that is necessary in a field in which the material processes of production and preservation are markedly different from those of print literary culture?' Further, one might ask along these lines: is the very idea of canonicity an artifact of print culture: an evitable and passing moment in the media specificity of literary reception? 'Access' to Homeric poetry, for example, was time based, not 'on-demand'. We are accustomed to thinking of access as perpetual, but this might be a relic of the print-based art era.

If ephemerality is one condition of electronic literary canon formation, search algorithm is its 'other': a tactical doppelganger whose shape is protean and whose purview is largely beyond our scrutiny except in analyzing its outputs. 'Michael Joyce' is a searched term linked forever by page-rank algorithms to 'hypertext' and 'electronic literature'. In their talk at Digital Humanities, 2013, Anna Jobin and Frederic Kaplan asked, '[a]re Google's linguistic prostheses biased toward commercially more interesting expressions?' Evidence they presented suggests that it is. In her personal blog, Jobin glosses her scholarly findings with Kaplan: autocomplete searches 'mediate between our thoughts and how we express these thought in

(written) language...But of all the mediations by algorithms, the mediation by autocompletion algorithms acts in a particularly powerful way because it doesn't correct us afterwards. It intervenes before we have completed formulating our thoughts in writing. Before we hit ENTER'. Hence '[a]lgorithms are more than a technological issue'; they are personal and political, '[w]hich makes it impossible to ignore the question whether algorithms can be accountable'.

The name 'Michael Joyce', locked in 'terminal embrace' with electronic literature even though Joyce's has not authored hypertext for years, is an artifact of search's reinscriptive power. Even if Coover had sought one, there is no reciprocal term he could have used to deem Malloy a progenitor. 'The grand-mammy of hypertext fiction'? The 'grand dame of hypertext fiction'? These would not work. The language to represent Judy Malloy's achievement was less likely to occur to Coover, who describes himself in that article as 'not an expert navigator of hyperspace' and 'committed, for better or for worse, to the obsolescent print technology'. There were additional impediments to seeing Malloy as the originator of hypertext that Coover does not name: to look to the west coast for literary origin, to esteem comedy more than tragedy, to recognize coterie distribution over a press, to praise a single mom with a Bachelor's degree over a young male novelist with a print novel and ~~an MFA~~ from the Iowa Writer's Workshop. Such are the human judgments that launch a million clicks.

Coover did not invent 'granddaddy' to describe Michael Joyce's fiction. He invented Michael Joyce to inhabit 'granddaddy'. In 1992, one wonders whether people at Vassar, where Michael Joyce was then temporarily teaching, noted Coover's pronouncement.[11] It would not have been conceivable in 1992 that the impact of that endorsement would be measurable, let alone field-defining, 20 years hence. But distant reading permits us to see just that.

The Malloy/Joyce reception history gives us a cogent example of how 'the crisis of meaning' in the humanities is a human/non-human collusion that manifests itself as an archive-as-monument. Duke University's Rubenstein Library purchased Judy Malloy's Papers. The collection features

Malloy's Printed Materials, Notebooks, Early Artists Books, Writings and Programming, Exhibitions, Talks and Readings, Correspondence, Media by Other Artists, and Personal Materials.

It is 15.6 linear feet, consisting 13,200 items.

Judy herself is about 5.5 feet, a slight woman with sandy blonde hair.

After a long spell of underemployment, Judy won a 1-semester Anschutz Distinguished Fellowship in American Studies at Princeton Fall 2013. That completed successfully, she continues to seek a university teaching job, as she has been doing for years.

Willard McCarty, in his Roberto Busa Lecture at Digital Humanities 2013, disclosed 'viscerally and personally' that he 'didn't walk a career path, but followed the smell of food on the wind'. Eloquently he summoned disinterested love: the passion for work so complete that—citing Mosheh ben Maimon—'whatever you do, do it only out of love'. Like the male and female early hypertext pioneers working at the same cultural moment, younger McCarty and his colleagues were 'languishing on the academic periphery'. But he did it for love. 'I threw myself into it never thinking for a moment that it would pay off. How wrong I was.'

One wonders if, over the decades they have been impelled by the same fierce love, the women hypertext authors caught themselves thinking the opposite of McCarty: that if they threw themselves into it, maybe possibly ~~in some distant world~~ it might pay off. That if they created multiple computational authoring systems and a scholarly book from MIT Press, as Malloy did; or a hypertext novel of the length and plot intricacy akin to *Gravity's Rainbow*, as M.D. Coverley did; or 'possibly the greatest example of electronic literature yet attempted—measured by volume, at least—but arguably also on a scale of importance', as Stuart Moulthrop said Stephanie Strickland did in 'Sea and Spar Between' (coauthored with Nick Montfort).

~~Perhaps these women thought: If I throw myself into it, maybe it will pay off.~~

~~Perhaps~~ the early-career digital humanities female scholars think: if I learn to code, it will pay off.

While the early hypertext women themselves continue to 'languish', as McCarty did all those years ago 'on academia's periphery', universities are paying healthy sums to sustain and provide access to ~~their~~ medially fragile works in special collections at university libraries. That is, universities are making financial commitments to the women's papers, code, floppy disks, vintage machines, and ephemera, but not to the women when they need/ed it most, making art. Samuel Johnson to Lord Chesterfield:

> Is not a Patron, My Lord, one who looks with unconcern on a Man struggling for Life in the water and when he has reached ground encumbers him with help. The notice which you have been pleased to take of my Labours, had it been early, had it been kind; but it has been delayed till I am indifferent and cannot enjoy it, till I am solitary and cannot impart it, till I am known, and do not want it.[12]

This is a signal gesture of the neoliberal university: to invest in what can be digitized, shared at scale, repurposed illimitably like online learning modules. Meanwhile, the women themselves are fungible: assimilated without incident into a professoriate devastated by adjunctification. The majority of new positions in language and literature departments are now filled off the tenure track.[13]

Artists teach us that ephemerality is radiant possibility; that beautiful computational art decays suddenly, one update away from death. Despite this, as McCarty says, you do it for love.

I ~~see that. I feel it. Love?~~

Tina Turner asks: 'What's love got to do with it?'

Funding

References

Coover, R. (1992). 'The End of Books.' *NY Times Book Review* 21 June. http://www.nytimes.com/books/98/09/27/specials/coover-end.html (accessed 18 July 2013).

Emerson, L. (2011). 'On E-Literature as a Field.' *Reading Writing Digital Textuality*: loriemerson.net. Blog. Parts 1 and 2. Oct. 12 and 15. http://loriemerson.net/(2011)/

10/12/on-e-literature-as-a-field/ (accessed 14 May (2014)).

Galloway, A. (2012). *The Interface Effect*. Cambridge and Oxford: Polity Press.

House Committee on Education and the Workforce; Democratic Staff. (2014). The *Just-In-Time Professor: A Staff Report Summarizing eForum Responses on the Working Conditions of Contingent Faculty in Higher Education*. Washington, DC: U.S. House of Representatives. http://mpsanet.org/Portals/0/1.24.14-AdjunctEforumReport.pdf (accessed 20 June 2014).

Jobin, A. (2013). 'Google's autocompletion: algorithms, stereotypes and accountability.' Sociostrategy. http://sociostrategy.com/(2013)/googles-autocompletion-algorithms-stereotypes-accountability/(accessed 1 July 2014).

Jobin, A. and Frederic, K. (2013). 'Are Google's linguistic prostheses biased toward commercially more interesting expressions?'. *Conference Paper delivered at Digital Humanities Conference*. 18 July, 2013.

Frederic, S. (1755). 'Letter to Lord Chesterfield: 7 February 1755,'. *Johnson's Letter to Lord Chesterfield 7 February 1755* [webpage], edited by Jack Lynch [Johnsonian at Rutgers University]. http://andromeda.rutgers.edu/~jlynch/Texts/letter55.html (accessed 4 May 2014).

Joyce, M. (2013). Personal correspondence with the author. 21 July.

Koeser, R. S. and Brian, C. (2013). Networking the belfast group through the automated semantic enhancement of existing digital content. *Journal of Digital Humanities*, 2. http://journalofdigitalhumanities.org/2-3/networking-the-belfast-group-through-the-automated-semantic-enhancement-of-existing-digital-content/ (accessed 15 March 2014).

Liu, A. (2013). The meaning of the digital humanities. *PMLA*, 128: 409–23.

Malloy, J. Notes on the Creation of Uncle Roger. Judy Malloy's personal website. http://www.well.com/user/jmalloy/uncleroger/uncle.html (accessed 18 July 2013).

Malloy, J. ~~'Notes on the Creation of Uncle Roger.' Judy Malloy's personal website. http://www.well.-.~~ (2013). Personal correspondence with the author. 17 October.

Malloy, J. and Cathy, M. (1996). Closure was never a goal in this piece. In Cherny, L. and Weise, E. R. (eds), *Wired Women*. Seattle: Seal Press.

McCarty, W. (2013). The digital and the human. Remembering the future of digital human [Roberto Busa Award Lecture at Digital Humanities Conference (2013)]. 18 July. (video recording). https://www.youtube.com/watch?v=nTHa1rDR680 (accessed 1 July 2014).

McPherson, T. (2012). Why is DH so white; or thinking the histories of race and computation. in Gold, M. (ed), Debates in the Digital Humanities. New York: CUNY.

Posner, M. Some things to think about before you exhort everybody to code. Miriam Posner's personal website. http://miriamposner.com/blog/?p=1135&cpage=1#comments (accessed 18 July 2013).

Raley, R. (2012). [Title not specified: profile of Ian Hatcher's *Signal To Noise* and social reading] at '*Electronic Literature and Future Books*' Symposium M.I.T., 4 May 2012. http://web.mit.edu/comm-forum/forums/electronic_literature.html (accessed 25 May (2012)).

Rettberg, J. W. (2012). Electronic literature seen from a distance: the beginnings of a field.'. *Dichtung-Digital*. http://www.dichtung-digital.org/(2012)/41/walker-rettberg/walker-rettberg.htm#6 (accessed 18 July 2013).

Rettberg, J. W. (2014). Networks of electronic literature: visualising dissertations and the creative works they cite' forthcoming in *ebr* [electronic book review]. (accessed via personal correspondence with the author 26 May (2014)).

Rettberg, S. (2014a). Electronic literature. in eds. Ryan, M. -L. Emerson, L. and Robertson, B. (eds), *The Johns Hopkins Guide to Digital Media*. Baltimore: Johns Hopkins University Press.

Rettberg, S. (2014b). An emerging canon? A preliminary analysis of all references to creative works in critical writing documented in the ELMCIP Electronic Literature Knowledge Base.' *ebr* Electropoetics Thread 1 June (2014). http://www.electronicbookreview.com/thread/electropoetics/exploding (accessed 10 June 2014).

Scalzi, J. (2012). Straight white male: the lowest difficulty setting there is. http://whatever.scalzi.com/(2012)/05/15/straight-white-male-the-lowest-difficulty-setting-there-is/ (accessed 18 July 2013).

Tal, K. (2013). Comment on 'Judy Malloy's Seat at the (Database) Table: A Feminist Reception History,' the Digital Humanities (2013) conference paper authored by Kathi Inman Berens. http://kathiiberens.com/(2013)/07/19/dh-2013/#comment-945 (accessed 1 August 2013).

Notes

1 Walker Rettberg notes that the influence of Coover's pronouncement has actually been expanded from 'full-length hypertext fictions' to stand for 'electronic literature as a whole.' While there are multiple possible causes for this expansion, one key is that '*afternoon* has been anthologized by Norton, is substantially analyzed and discussed in dozens of academic treatises and is taught or at least mentioned in almost every course taught on electronic literature'.

2 Walker Rettberg finds 181 citations of *afternoon: a story*, which she scanned to eliminate false positives. The second-most cited work, Shelley Jackson's *Patchwork Girl* (1995), is cited approximately 66% less than *afternoon*. 'Interestingly', Rettberg notes, '*Patchwork Girl* has more citations in the humanities and social science journals primarily indexed by MUSE and ProQuest. It seems *that afternoon* may have influenced a broader audience of scholars, but that *Patchwork Girl* has influenced literary scholars more heavily'. This perhaps is attributable to Jackson's intertextual play with its chief sources, Shelley's *Frankenstein* and L. Frank Baum's *The Patchwork Girl of Oz*. Together, these two Storyspace works *afternoon* and *Patchwork Girl* published with ISBNs by Eastgate Systems 'tower above the rest of the field' as the most cited works. Scott Rettberg observes in 'An Emerging Canon?' that the 'holy trinity of *afternoon*, *Patchwork Girl* and *Victory Garden* [by Stuart Moulthrop]' are 'likely' to be more frequently cited both because 'they are high-quality works of enduring interest to scholars and . . . much of the earlier criticism of hypertext fiction tended to center around a smaller overall set of works'.

3 Higgenboom: 'In his quantitative studies of English literature, Franco Moretti bluntly divides literature into the canon (*The Ambassadors*) and the 99% we no longer read (*Dashing Diamond Dick*), good only for "distant reading" and data mining. Ironically, [Moretti] defends the canon to makes his arguments.' Higgenboom's 'quantitative approach focuses on the grey area of what everyone throughout Europe was reading, the . . . sentimental novels' written 'in great quantity to satisfy readers'.

4 Malloy, 'Closure Was Never The Point', in *Wired Women*, 58.

5 Judy Malloy notes in a personal correspondence: 'I did a graduate seminar in Systems Analysis at the University of Denver and I took a company sponsored course in FORTRAN when I worked at Ball Brothers Research Corporation in Boulder, where I headed a team that created a computerized library catalog in 1969, a time when this was an accomplishment. However, I did teach myself UNIX shell scripts and BASIC in order to create *Uncle Roger*. Generally it isn't to difficult to move between similar systems.'

6 It is not only women authors of early hypertext whose participation is invisible or recoverable only incidentally, by asking around. Obscurity shrouds men, too, who stopped writing electronic literature and no longer participate in the community. At the time when they were writing, these people were messing around, experimenting with expressive programming. It is only in retrospect that the coterie coheres into a field. Lori Emerson suggests that e-literature is 'born' as a field in 1999, when Scott Rettberg, Robert Coover, and Jeff Ballowe founded the Electronic Literature Organization as a 501(c)3 non-profit organization. For a full history, see Scott Rettberg's entry on 'Electronic Literature' in the *Johns Hopkins Guide to Digital Media*.

7 The 2014 Critical Code Studies Working Group 'Feminist Code' thread was led by Arielle Schlesinger, Jacqueline Wernimont, and Ben Weidermann. Indeed, feminist discussion percolated throughout the Working Group's other threads, 'Expressive Programming' led by Nick Montfort and 'Post-Colonial Code' Code led by Adeline Koh, Amit Ray, and Roopika Risam. Tara McPherson's powerful essay 'Why is DH So White; or, Thinking the Histories of Race and Computation' primed such inquiry. Juxtaposing the history of UNIX alongside the social unrest of the US Civil Rights movement and global protest, McPherson speculates that the development of UNIX as modularity was a formal response that encoded computationally a desire to excise the social disruptions fomenting outside the lab.

8 E-literature artists such as Joerg Piringer, Erik Loyer, and Jason Edward Lewis have moved some of their artistic production to the iOS environment to test whether artists can make money in Apple's distribution environment. Certainly some commercial story artists backed by publishing houses, and some design shops such as Simogo are experimenting with iOS distribution. Transmedia artist Christy Dena crowdfunded AUTHENTIC IN ALL CAPS, an audio tour of the Web, to develop for iOS. Jody Zellen, Ian Hatcher, and Stephanie Strickland, among many others, have distributed free electronic literary works via iOS.

9 This problem is endemic to the emerging field of Netprov, improvised comic writing distributed via social media platforms like Twitter and Tumblr. For more on the challenges presented by an archive of ephemeral performance, see my 'OccupyMLA's Hidden Archive', forthcoming fall 2014 in *Hyperrhiz*.

10 There has been talk of Eastgate Systems releasing iPad adaptations of Malloy's *its name was Penelope* and Joyce's *afternoon*; but even if those works were to be adapted to the iOS environment, our device-specific reception habits and aesthetic expectations would be frustrated by faithful adaptations that preserved the monochromatic color scheme and comparatively limited responsiveness to click (rendered in iOS as gesture). For more discussion of iOS, adaptation and 'device-specific' reception, see Berens, 'Touch and Decay: Adapting Tomasula's *TOC* to iOS' forthcoming in *Steve Tomasula: The Art and Science of New Media Fiction* (Bloomsbury) edited by David Banash.

11 Michael Joyce notes in a personal correspondence that in 1992 he was teaching at Jackson Community College.

12 Samuel Johnson to Lord Chesterfield, 5 February 1755.

13 In January 2014, the United States House of Representatives issued 'The Just-In-Time Professor', a report detailing contingent working conditions in higher education. Using data from the US Department of Education, it found that since 1975, the number of adjuncts has increased 300%. In all, 75.5% of faculty positions across departments and institutional types are contingent.