Afterword

The Sappho Syndrome, and Other Concerns in the Preservation of Born Digital Media

by Dene Grigar



Figure 6.1: Judy Malloy at her office at Princeton University

***Ex Nihilo, Nihil Fit***

In the Electronic Literature Lab (ELL) there is a cabinet where David Clark’s *88 Constellations for Wittgenstein* (2009), Christine Wilks’ *Underbelly* (2010) and Steve Tomasula’s *TOC*: *A New Media Novel* (2009) reside along with over a hundred other titles of electronic literature that cannot be read on current Apple computers, which, as we have shown in the book, is an ironic situation considering that works of early digital literature in the U.S. were produced predominately on Apple and Macintosh computers. Many of the works in the collection, like these three, are less a decade old. Others, like the four examined in this book, date back to the 1980s and 1990s. Multiple copies of many works fill the shelves in the belief that when one copy finally fails––when the dreaded message “This Disk Cannot Be Recognized. Do You Want to Initialize This Disk?” comes––there is yet another copy on which to fall back, with which to cheat the work’s death, so to speak. In the collection are also mobile apps created less than five years ago––like Erik Loyer’s *Strange Rain* (2011), Mark Amerika’s *Immobilité* (2011), and Jody Zellen’s “Spine Sonnet” (2012)––retained on first generation mobile devices untethered from the Internet in an effort to hold on to early versions of them or perhaps even to preserve them entirely. In other cabinets in the room one finds vintage software applications––MacDraw and MacPaint, but also versions of Flash, ClarisWorks, and others––and stacks of 3 ½-inch floppy disks with documents and art saved on them that need these early software programs in order to be accessed. Below the cabinet and around the room resting on counters are 22 of ELL’s 45 vintage computers, plugged in and awaiting service to the works of art held in the collection. An Apple IIe sits next to a GS; just beyond lies a Plus, SE, Classic, Classic II, LC, Performa, “Bubble,” “Sunflower,” “Cube,” G4 Tower, and a contemporary flat-screen iMac––the perimeter of the room a veritable tour of Apple’s history from the early two Steves (Jobs and Wozniak, for those not in the know), to Jobs’ departure, to his triumphant return, to his death. When seeing the Bondi Blue “Bubble” with its matching mouse and printer––a favorite among guests––some visitors respond nostalgically about the computer they grew up with or remember using in grade school. Others, taking in the totality of the room, ask why all of the effort has been put into holding on to old media. “Why all the effort?,” they ask. Indeed, *why*?

There is a method to the madness––a rationale for ELL’s effort, if you will: to preserve *and* make available works of early electronic literature to the public in order to promote the understanding and study of this experimental form of media. There are only a handful of collections like ELL. Mentioned in our book are Lori Emerson’s Media Archaeology Lab (MAL) at the University of Colorado; the Maryland Institute for Technology in the Humanities (MITH) at the University of Maryland College Park, directed by Matthew Kirschenbaum, that holds The Deena Larsen Collection and The Bill Bly Collection; and Nick Montfort’s Trope Tank at the Massachusetts Institute of Technology (MIT). These labs and collections allow visitors to access and experience media via vintage hardware for the purpose of scholarship and personal enlightenment. During the production of the Bly chapter for *Pathfinders* at MITH, for example, the leading software studies scholar, Jeremy Douglass, was in the midst of exploring the many boxes of the Bly artifacts available in MITH’s collection and accessing Bly’s fiction on MITH’s vintage computers. Libraries at the University of Texas at Austin holding Michael Joyce’s work and at Duke University holding Judy Malloy’s, Stephanie Strickland’s, and Mez Breeze’s have a different, important mission––the preservation of the artifacts themselves––so cannot allow visitors to experience the work on many floppy disks and CD-ROMs in their collections as Douglass was doing at MITH. But MITH, ELL, and its sister sites maintain working hardware precisely for the purpose of reading the works archived in their collection. For ELL, this means born-digital literary works dating back from 1984. The idea behind ELL is this: The more people who know about and study these works, the more they will write about them; the more articles and books written about this work, the more documentation there will be about these works; the more documentation about these works, the more evidence we will have that these works existed; the more evidence disseminated and available about these works, the more likely future generations will know these authors and their works as well as––more broadly––gain a good understanding about late 20th and early 21st century media culture, art, and literacy.

We come at our work in digital preservation with the idea that “nothing comes from nothing” (*ex nihilo, nihil fit*). Thus, ultimately, having access to early digital literature can provide insights about their own media culture, art, and literacy. As we have stated earlier, it is our premise that these early works of electronic literature represent an important moment in time when writers and artists began to make the leap from print to digital media spaces for the purpose of creating art and that this period resulted in a great experimentation and innovation that resulted in new artistic forms and continues to result in forms we cannot even anticipate. As we write this book, students in Grigar’s program at Washington State University Vancouver are experimenting with virtual reality systems, Oculus Rift and MetaVR, to produce stories in a 3D virtual environment; in August visitors to Grigar’s exhibit at the 2015 International Symposium on Electronic Art in Vancouver, B.C. were fascinated with Amaranth Borsuk and Brad Bouse’s *Whispering Galleries*, a story comprised of diary entries that requires user gestures via Leap Motion technology to interact with the media and move the story along. These innovations have not emerged out of nothing. Directly or indirectly, they belong to a history of artistic development. As this author pointed out in her curatorial statement for the electronic literature exhibit she co-curated at the Library of Congress:

[E]lectronic literature is a natural outgrowth of literary experimentation and human expression with roots in print literary forms and, so, constitutes an organic form generating from the dynamic human spirit that is evolving, will continue to evolve through time and medium. No matter the medium––orality, writing, print, electronic, mobile––give an artist something, anything, to create with––air, animal skin, paper, computer screen––and she or he will find a way to use it for making art. This impulse is, after all, a feature of our humanity.” (Grigar, “Curatorial Statement,” *Electronic Literature & Its Emerging Forms*)

Access to early electronic literature provides crucial insights into the shift from print to the electronic medium, what led early artists toward this type of experimentation, and, in the case of artists like Shelley Jackson, what eventually led them away.

**The Sappho Syndrome**

One may think that emulator software that attempts to mimic original platforms can help to solve the problem with access. As we have argued in Chapter 3 concerning Malloy’s *Uncle Roger* Version 6.0 presented in DOSBox, cultural context is a crucial aspect of these works and contributes to their legacy. But this reasoning still does not explain what is driving the desire to make early digital literature available in its original formats on original equipment. Know this: For every *Uncle Roger* there are tens of Sarah Smith’s *King of Space* (1991) that are quickly becoming lost and, unfortunately, forgotten because they are not being preserved through migration *or* emulation. All that is left to preserve them at this moment in time is *collection*––a method some might consider a last resource after the first two are exhausted––which is exactly what ELL offers. So, the impetus for ELL, as well as *Pathfinders* and this book that utilizes it, is a condition we call the “Sappho Syndrome”––that is, the disappearance of complete works of literature to the extent that all that remains are fragments and references to the works and authors. Our concern is that in some distant future no one will even know the extent of production of early hypertext fiction and poetry or understand the many different approaches authors took that led to a new ways of thinking about textuality and writing for electronic contexts. ‘Even if a few works survive, there will be no way to understand the complexity of their workings or design.’ How many readers of this book even knew before reading Chapter 4 that McDaid’s *Funhouse* included two music cassettes packaged in the box? Certainly we have shown in Chapter 5 that Bly’s *We Descend* is not a novel––much less a crime novel––as some critics have argued. The condition is not limited to electronic literature but extends to other forms of media.

The choice of “Sappho” for the syndrome rests on two interconnected ideas: The loss of work can be accidental, and it can be purposeful. Let us explain.

Sappho is the 7th century B.C. poet often referred to as The (original) Tenth Muse who may have been among the first poets of her day to write deeply personal poetry about family, lovers, and adversity. Much of what we have of her work are fragments, references made by others who followed her––historians, philosophers, writers, theologians––reciting her work that even they could not verify as belonging to her through direct proof. Until recently only one long fragment of a poem, “Hymn to Aphrodite,” had been available to us to read and study. In 2014 two new poems, “The Brothers Poem” and “The Kypris Poem,” have been discovered and published. The first of these two is important in that it reveals that Herodotus “did in fact draw on earlier poetry for his historical evidence” (Obbink). It also provides insight into Sappho’s life––that is, her disappointment in her brother for his attachment to a woman of which the family did not approve.

These three works however constitute but a handful of the many we believe Sappho created during her lifetime. Fragments left to us were produced on papyrus, some of it recycled, but all of it fragile. Additionally, we have lost nine books of her collected work purported to have been produced after her lifetime; these were destroyed not by poor environmental conditions, but rather burned by Christians in two major initiatives in 380 AD and 1073 AD (Hare). On two fronts, therefore, has the bulk of Sappho’s work been lost to us: The papyrus on which many of her poems would have been written may have been compromised by damp weather conditions and so *accidentally* ruined over time, and the books left to us *purposely* destroyed in efforts to keep her work from the public and erase her from history.

The decay of electronic media cannot easily be prevented. Bits rot. Aristotle did get it right; things that reside in the sub-lunar realm are corruptible. People and floppies eventually fail. Efforts to prolong our lives and the lifetime of our software and hardware may be perceived as folly. One day ELL’s last Mac Classic will stop working, and all parts available to it will have been exhausted; one day the last CD of McDaid’s *Funhouse* will become unreadable, and there will be no way to replace it. There is no way of knowing just how long the hardware and software ELL contains will survive. Key therefore is the effort to maintain ELL long enough to document all of the works it holds, will continue to hold as we continue to collect future works of electronic literature. We accept this duty knowing full well that we cannot prolong life indefinitely. We are not fools.

The other loss, willful erasure of the past, worries us more. Ideology tied to the purposeful aim of destroying artifacts in order to eradicate them from human memory is something we cannot predict or control. No amount of migration, emulation, or collection can protect our heritage when ideology runs amok. This morning, news outlets reported that ISIS destroyed the Temple of Baalshamin in Palmyra, the city where Zenobia, the warrior queen who defied ancient Rome ruled, a city also known once, ironically, for its religious and ethnic tolerance (Manning). What will happen to these two legacies if no evidence of Palmyra endures, if the destruction spreads? Will the notion that women did indeed rule nations during ancient times be forgotten? Will the concept of religious tolerance in the Middle East become lost? The destruction of the temple follows many other acts of destruction throughout history aimed at sites and artifacts considered sacrilegious. ISIS is just the most recent group to engage in this conduct. [2]

Some may think overt ideological censorship is unthinkable in advanced, enlightened countries, but even if the Isis insanity never spreads to our shores, it should make us aware of the fragility of the past and our obligation to remember and preserve. Even if we remain free of willful forgetting, we must always worry about the unexamined effects of neglect and disregard.

While any censoring of history and culture is alarming––Bly raises this very issue in *We Descend*––erasure of women’s contribution to history and culture is especially troubling. Like papyrus this history is being painstakingly recovered––layer by layer, strip by strip––and documented in order to evince the existence of the work it sustains. [3] Women wrote, have always written. Sappho is proof. But how many more Sapphos whose works we never knew about were also thrown into the fire? How many will end up there one day in places where an educated woman writing about her life is a threat to society?

It is particularly important to document women’s writing of literature because of its connection to computation, which is so closely associated with science. Many of the women who produce electronic literature code their own work. As we pointed out in Chapter three, Malloy mastered many computing languages in order to create the six versions of *Uncle Roger*. The author of this chapter coded her own hypertext fiction, *Fallow Field*, and non-fiction piece, *The Jungfrau Tapes*, having taught herself HTML in 1995 in order to publish her scholarship online. The notion that science and technology are masculine endeavor, one to which women are ill-suited, is grounded in Western philosophical tradition, beginning with Plato. It is suggested in his works, the *Republic* and the *Timaeus*, and carried through to the present in discussions about women’s ability to handle the rigorous thinking the sciences require. [4] The former of these two works presents a continuum in which science and math are pursuits found in the rational world of ideas connected to mind that lies beyond (and so superior to) the irrational material world of reflections, shadows and objects. Implicit in his hierarchy is the notion that women reside in the material world, unable to transcend the shackles that bind them there. The latter, *Timeaeus*, produced in the last period of Plato’s career, claims that the reason why women cannot achieve an understanding of the transcendental world of math, science, and the ideal forms is because they are morally incapable of doing so; they are at the core less than men (42b-c).

**Early Attempts at Archiving**

The author of this chapter became involved with documenting women’s technological enterprises in the late 1990s and early 2000s when she managed a MOO (Multi-User Domain Object Oriented) at Texas Woman’s University where she taught until 2006 (Figure 6.2). At that time, she collected email



Figure 6.2: Opening screen of TWUMOO showing WCET

messages and other forms of electronic writing by authors Cynthia Selfe, Gail Hawisher, Cynthia Haynes, and others, calling the project the Women’s Collection of Electronic Texts (WCET). WCET

aimed to ensure that women’s writing produced in and for electronic spaces lived on, archived and available for study. Driving the project was concern that women, in some distant future, would not be seen as technologically savvy enough to have written in electronic spaces––that like Sappho, only one female writer would survive through the ages. And because only one survived, she would be seen as an anomaly, an exception to the rule. [5] The idea would develop that women did not produce

writing in the late 20th and early 21st centuries, were incapable of mastering the technology needed to write in online spaces, could not learn to handle a computer much less learn to code. We cannot let such myths to be propagated. [6]

WCET ended due to a lack of continued funding, but ELL, supported at a research institution and having a broader vision of collection, has faired better. *Pathfinders* and this book, both stemming from years of labor, have now documented two female writers among the many that Marjorie Luesebrink and Stephanie Strickland have identified in their research. [6] We have many more women––and men––to go.

We invoke Sappho because the loss of women’s writing is so severe and because loss and suppression of women’s work and history runs so deep in technological culture. Yet our concerns are not limited to women’s writing. Sappho stands for many—and sometimes for men. We worry equally about the lost work of any racial, sexual, or intellectual outsider and of those whose art strays too far from particular commercial or ideological mainstreams. Creatively if not literally, our mothers were computers—those intimate links between the ideal world of number and the reality of the animal and the machine. Our mother-computers had daughters and sons, and we desire the future to remember all of them, even though we know this can never be possible in any total sense.

**A Broader Vision of Digital Preservation**

The discussion of expanding collection compels us now to pivot to lessons learned from our work with documenting electronic literature. At the heart of our endeavor has arisen the concern for the preservation, archiving, and dissemination of all digital objects, a broader vision that sits at the junction of two streams of thought.

On one side, scholars are asked to acknowledge the importance of physical objects and mechanisms. Here we follow Kirschenbaum’s recent insistence, in contrast to Friedrich Kittler, that *software is a thing,* a phenomenon linked to particular creations, institutions, and practices, thus amenable to systematic treatment even as circumstances rapidly evolve. At the same time, we also affirm the ideas suggested by Harrell, for whom digital productions, like all aspects of culture, remain an important sense *phantasmal* based partly on projection and inference, “results of the imagination” (4). Software, we might say, is indeed a thing but also something more. It is set of processes that include affordances, emergent effects, and crucial indeterminacies. In this sense, digital objects require us both to engage and to sustain that engagement in extensive commitment.

Kirschenbaum’s materiality and Harrell’s imaginary converge in the act of reception, a practice once understood as *reading* or *interpretation* which now overflows those terms as objects of digital expression take on elements of operation, configuration, and play. As Eskelinen observes, the general scheme in pre-computational expression was *configure to interpret*––the text was unfolded or otherwise made available for parsing and consideration, but as expression becomes dynamically mediated, the figure once known as the reader (now also user, operator, player) *interprets to configure*, evoking particular states from a phantasmal space of possibilities. In Myers’ terms, this means engaging the system in “recursive contextualization” (21). This change in the textual frame poses a significant challenge for those who stand at one removed from the immediate receiver––those invested in the posterity of digital productions. How do we balance our desire to preserve software as material object against our understanding of that object as a container of multitudes, or phantasm? How do we save both the thing itself and the something-more of its potentiality? These problems are exacerbated by our need to save the work of women and others exposed to the keen edge of forgetting.

From the beginning of our current work, we have identified *collaboration* as a logical response to the daunting challenges we face. In our *Pathfinders* project, we recorded experience of early works of electronic literature in their original technical contexts, with both authors and ordinary readers as participants. The results are intended to provide at least a nominal trace of these increasingly fragile objects, both in their materiality and their configurative possibilities. However, one incident in our earlier research caused us to expand our definition of collaboration. The migrated version of *Uncle Roger* allowed us to familiarize ourselves with Malloy’s text without relying on our limited stock of vintage computers, for which every minute of operation had become precious during that day of videotaping her traversal and interview. Though we did not intend to use the migrated version for recorded traversals, we were forced to do this for this part of the work after the single Apple IIe available at our filming location suffered a failed power supply. This failure was unfortunate in some ways––the migrated version does not preserve certain features of Malloy’s original work––yet it also had consolations. Availability of a backup version allowed us to record a traversal of a second part of *Uncle Roger* in addition to the section for which we were able to use our vintage machine. More importantly, the change in plan focused our attention on two matters: the value of multiple approaches to preservation, archiving, and dissemination; but more than this, the complementarity of approaches based on their values and limits.

Obviously, we were grateful Malloy had migrated *Uncle Roger*. In addition to meeting our emergent need, the migrated version keeps her work directly available to scholars and casual readers. However, as discussed in Chapter 2, we discovered important departures from the original design, in which writing was presented on the 50-space, character-mapped screen of the original Apple IIe. The migrated version uses longer line lengths, which change the reading experience in subtle but important ways. We also discovered the migrated version is not compatible with the most recent, 64-bit computer systems. To use the migrated version we relied on machines still running nearly ten-year-old software, again potentially raising problems of fragility and obsolescence. Malloy may soon have to rebuild *Uncle Roger* a *seventh* time. Clearly, migration is an ongoing commitment, not a singular solution.

And yet, migration and its close cousin, emulation, which aims to deliver a completely seamless re-creation of an original system’s function on a newer platform, have value even to researchers interested in other means of preservation. Our experience with Malloy’s text fed an emerging sense of a larger project beyond *Pathfinders*. This thinking was further advanced by discussions with colleagues working on other methods of preservation, archiving, and dissemination of digital texts, notably Kirschenbaum, Emerson, and Douglass. These contacts inspired us to think about combined and coordinated approaches across multiple sites, underscoring the value of expanded collaboration and application to video games, virtual worlds, digital writing, digital publications, and other types of digital literary and artistic objects. We have begun to frame what we believe are essential questions about digital preservation: For what kinds of digital objects is one approach more desirable than another? How can differing approaches be combined or coordinated to best serve the interests of future scholars? What can researchers working on one sort of digital production (electronic literature, for instance) learn from those concerned with different but related areas (e.g., video games, digital writing more broadly conceived, or social-network discourse)? How, in other words, can researchers approaching the posterity of digital texts from diverse directions benefit from exchange of perspectives and results?

In asking these questions, we believe we are responding to a key challenge that stands before Digital Humanities generally: How to transmit the heritage of a culture whose objects are multiplying not simply in mass of items but also in types of system or interface––and where the nature of those varying interfaces greatly complicates the task of identifying, collecting, and otherwise treating the object. Clearly, no single approach can be the best in this situation. Multiplicity is a mandate. Sappho is the patron poet or computer-mother of us all.

**Final Thoughts**

Over the span of our careers we have seen our field of study pass through the critique of literary canon, the replacement of canon by communities of interest or response, constituting what Richard Lanham has called an “attention economy” (Lanham 70). As part of Hayles’ and Liu’s migration to “the literary,” the attention of scholars has moved from universal or totalizing bodies of discourse to more contingent structures: protocols, platforms, and interfaces (See the work of Emerson, Montfort and Bogost, and Alexander Galloway). In his recent reflection on video games within a constellation of cultural forces, Bogost proposes a new emphasis on “media micro-ecology” (2011, 6), in which any local type of semiotic production articulates in complex but significant ways to a larger universe of objects, technologies, and signs. We see the wisdom of this approach but believe it requires more than individual critical reflection. Media micro-ecologists may each have their own patch of terrain to explore and preserve at ground level, but each patch of ground still belongs to a larger continent of expression. No matter how atomized or ramified our work we will need sooner or later to return to common ground. That is the general aim of our vision with which we leave our readers.

As Liu observes, “[w]here postindustrialism extends its baseline back only as far as the last financial quarter or year, the humanities respond by asserting that the real value of knowledge can only be gauged across centuries and millennia” (2004, 381). Writing has been the primary means by which humanists have extended their work through time but with the advent of digital media, writing comes under challenge. Merged with software systems, writing and other forms of expression are subject to disruptive forces of obsolescence, in material as well as social terms. Media objects themselves grow more complex, from the basic duality between encoded or latent text, and what users see (Aarseth’s texton/scripton duality) to the particular intricacies of individual interfaces and architectures. If the humanities are to continue its contribution it is essential that humanists evolve ways of dealing with relentlessly advancing media. It is also clear that multiple approaches are needed. Some objects may lend themselves to software emulation or system migration, while others, constrained by property claims and other issues, may be better served by documentation of experience. Others may require preservation of original platforms. Each of these methods brings unique affordances, and each also comes with limitations. Scholars committed to the posterity of computationally intensive expression need a frame of reference that integrates approaches across a broad domain of application. We are all together in this thing—art, history, technology, the culture of women, men, and machines—and though the task is impossible, we must struggle never to forget.

**Notes:**

[1] Dirk Obbink’s article, “New Poems by Sappho,” cites Martin West who suggests that this may not be her best work.

[2] Accounts of the destruction of pagan temples by Christians have been documented through time. See http://penelope.uchicago.edu/~grout/encyclopaedia\_romana/greece/paganism/temple.html.

[3] Much recovery work of women’s writing has taken place, especially in the last 35 years. See such work as the Women Writers Project, http://www.wwp.northeastern.edu/about/history/. We are also influenced by the work of Tillie Olson, especially her seminal work *Silences*.

[4] See “Summers’ Comments on Women and Science Draw Ire.” http://www.thecrimson.com/article/2005/1/14/summers-comments-on-women-and-science/.

[5] In the World Literature course this author took in high school, very few women writers were included in the book students were assigned to read. One fragment of Sappho’s poetry was among the handful by women that the book held. When discussing Sappho in class, a male peer claimed that because there was only one ancient female writer, she was an anomaly. He concluded after reading the book that women were incapable of writing because if they were, they would have been included in the text. Because for him writing was connected to intelligence, he was arguing that women were less than men. In 1972 it was difficult to refute his claim about women’s literary output. But feminist scholarship since the early 1970s has gone far to explain the dearth of women’s writing in various periods of time and locations in the world and has done much to recover writers who have been lost to us.

[6] Interestingly, while women are “lead adopters of technology,” they are less likely to pursue computer science today than in the mid-1980s, 18% compared to 37% (Gilpin).

[7] Their manuscript is in production and includes close to 150 published female authors of electronic literature.