Born Digital - Creative Writing and Literature Pedagogy
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Introduction

"Born Digital" -- a phrase the resonates with our times. Entering the phrase "born digital" into the Google search bar produces 19,000,000 results. Among the hits is the popular non-fiction book, '*Born Digital: Understanding the First Generation of Digital Natives* (Palgrave 2008), John Palfrey and Urs Gasser look at the norms of American college age student born in the 1990s and who grew up alongside the web. The book gives a fascinating ethnographic look at generational shifts in relation to identity and privacy.

Beloit College's 2015 "Mindset List" reminds us that for traditional age freshmen entering our classes this year "Google has always been there, in its founding words, “to organize the world's information and make it universally accessible.”" and "Email has become the new “formal” communication, while texts and tweets remain enclaves for the casual." "Teachers have always had to insist that term papers employ sources in addition to those found online."

Those of us teaching for some years, may have personally navigated the transitions in our own academic or creative writing practices from typewriter to word processor, from snail mail to email, mimeograph, desktop publishing, laser printer, web site, social media etc. Indeed, Mark Prensky's influential essay "Digital Natives, Digital Immigrants" articulates the need for teachers and institutions to adapt to a changed experience of the students coming into our classrooms whom, he suggests, "think and process information fundamentally differently from their predecessors." (1)

While I think it's important to be attuned to the relationship between teaching practices to generational norms -- knowing where my students are so that I can meet them there -- I come to the topic of "born digital" literature and creative writing today through a different pathway.

As a student of poetry "before the web," I was always most fascinated by those poets whom I perceived to be creating at the boundaries between media and at the border of literary, visaul art, and musical conventions. From William Blake's illuminated books and Emily Dickinson's hand-written fasicles, to avant-garde sound poetry, visual, and concrete poetry (Dada, Futurism, e.e. cummings), jazz poetry of Rexroth, Baraka, and Ginsberg to the video poetry of writers like Richard Kostelanetz in the 1980s. Even writers who did not at first seem engaged with the medium, I discovered, had shaped their work or been inspired by their relationship to print formats. I think most famously of William Carlos Williams writing drafts on a prescription pad or Kerouac composing On the Road with a typewriter and rolls of telegraph paper.

Beginning in the mid-1990s, we began to ask how writers, specifically poets, would make use of internet communications(the emerging web) as a publishing space -- seeing it also as a shift in literary communities, creating possibilities for new audiences, different modes of collaboration, new forms, etc. One tributary of these changes is the speculative discourse on

the "end of books." But let's set aside the discussion of the sales figures of a print and electronic books and observe that most critics would agree (Hayles, Drucker) that the ebook is not actually an example of born-digital literature. When we talk about "born digital" or "electronic literature, we're thinking about a more inchoate, emerging set of practices.. Twenty years on, there is now an "emerging" canon of born-digital literature -- poems, stories, and works of indeterminate or evolving genre that were composed for and often with computers and designed to be read / used/ played most richly through computer interfaces of one sort or another.

I first taught born digital literature in a high school English context in 1999. Since, I've had the chance to teach it at multiple levels, from designing stand-alone units to whole courses, from introductory college literature, to undergraduate creative writing workshops, to graduate courses in postmodern literature or theory. In each of these classes, my aim is not so much to show that there is an Elit equivalent to Toni Morrison or James Joyce" but to explore the heuristic possibilities of born digital literature:

- What can the reading of Born Digital literature do for literature or creative writing students?
- What can including of Born Digital literature in traditional courses add to the ways we teach?
- What can the writing/making of digital literature do for creative writing and literature students?

In the next few minutes, I hope we can address these three questions. First, I want to define ELit and introduce some of the works worth reading in English classes, then I want to share with you some of the reasons I think this worth reading, and then discuss the potential for enlivening the curriculum and engaging students by teaching them to write ELit.

Defining / Describing Born Digital Literature

So what is born-digital literature? As the field has emerged, a variety of terms have been introduced including e-poetry, new media writing, digital literature, electronic literature, cybertext... and subcategories including ergodic literature, hypertext, interactive fiction, algorithmic writing, code writing ... etc. [Note A Key Texts]

The nicest summation, however, is provided by Stephanie Strickland in a short 2009 essay written for the Poetry Foundation website. This is an excellent overview (cum manifesto), useful especially for writers and readers who may equate digital literature with the ebook, or consider the digital as simply a "presentational" strategy for poetry. Strickland writes :

> *"E-poetry relies on code for its creation, preservation, and display: there is no way to experience a work of e-literature unless a computer is running it—reading it and perhaps also generating it."* (Strickland)

So, as a rule of thumb, if you can print it out without ruining it, then it's not truly born digital.

With a series of 10 additional, aphoristic statements, Strickland the poet broadly sketches many of the most interesting facets of born digital practices from the perspective of a maker. [Note B Comment] Because it is "built as much as written" --Strickland tells us--it can explore the "feedback processes between humans and machines" allowing it to reflect in particular ways upon new, networked "social conditions" and to be experienced in spaces such as galleries or even by "directing people using mobile devices." As a complement to this largely writerly catalog, Strickland emphasizes that such works consequently require "new reading skills;" Elit is often "operated" or "play[ed]" in game-like fashion rather than being read, which is to say it invites or requires readerly interaction.

With more than a decade of criticism behind us, we could easily spend an hour in taxonomy, charting the relationships between different subgenres within Elit and carefully demarcating boundaries. Instead, if we keep in mind our pragmatic purpose of exploring the teaching of born digital literature in creative writing, undergraduate literature, and even general education classes, we can more casually look at a few broad types and explore examples with pedagogical import.

Aside: The discussions around the different labels and boundaries of sub-genres may not be very useful for novice students. However, teachers of literature and creative writing might find it useful to observe a distinction between born digital "literature" and other species of net-art, computer art, and interactive media. The Electronic Literature Association has sponsored a number of projects and initiatives related to the "literary" in digital culture. Most importantly, they have recently released (Feb 2016) the latest of three digital anthologies of born digital literature. Issued every five years, these edited collections gather together a range of works from across two decades. As a teacher, I rely on the Electronic Literature Collection as a curated space to which I can direct students; in addition, the brief introductory notes and technical "operating instructions" can be very helpful in successfully accessing new works.

In the examples below, I'll draw on categories associated with keywords in the three volumes of ELC

1. Hypertext

""Hypertext is a user-interface paradigm for displaying documents which, according to an early definition (Ted Nelson, 1970), "branch or perform on request" (ELC) The most frequently discussed form of hypertext document contains automated cross-references, called hyperlinks, to other documents. Selecting a hyperlink causes the computer to display the linked document within a very short period of time." (ELC 2) Hypertext is one of the earliest subgenres of digital literature to emerge and perhaps the first to convincingly show readers and writers a kind of writing which relied so fundamentally on "code for its creation, preservation, and display" (to echo Strickland). At the lowest common denominator, a hypertext is a collection of lexia (often paragraph length) which are structured through links, creating a multilinear space or network, in which the reader chooses reading paths. Coined and envisioned by Ted Nelson, hypertext as a literary practice rose to prominence through the pre-web publishing efforts of Eastgate Systems

which produced the Storyspace interface for authoring texts with complexing linking relationships.

In one sense, the experience of hypertext is now ubiquitous as the framework of the web. Certainly our "born digital" students know the intertextual experience of reading, clicking, reading some more, but relatively few of the web-based texts we consume daily are actually composed as multisequential texts. Shelly Jackson is one of the more recognized, early hypertext writers (along with Michael Joyce and Stuart Moulthrop). Her famous "Patchwork Girl" (1995) is a Storyspace publication which hasn't been ported to the web. Instead, I'll briefly share "My Body - A Wunderkammer" which gives some sense of immersion in a decentered, multilinear text.

1
EXHIBIT: Hypertext
Shelly Jackson
My Body - A Wunderkammer
http://collection.eliterature.org/1/works/jackson__my_body_a_wunderkammer/index.html

2. Interactive Fiction

IF is a "software simulating environment in which players use text commands to control characters and influence the environment." (ELC 1) Interactive Fictions have a "strong game element" (Hayles "Electronic Literature What Is it?" np) Like Hypertext, an Interactive Fiction piece requires decision-making and actions on the part of a reader, in relation to a spatial dimension and a world model. IFs are not so much texts as "computer programs that display text, accept textual responses, and then display additional text in reaction to what has been typed." (Montfort, Twisty Little Passages vii). Some IFs implicitly require the reader to map the world through which he/she is navigating. Instead of presenting links for the reader to follow, the typical IF (built using an authoring system like Inform7) interprets the natural language of the reader (Montfort viii) who reads/plays it by testing and probing to identify plausible moves which produce further text.

The award winning IF author Emily Short has published two dozen single and collaboratively authored IF pieces. "Galatea" is a futurist adaptation of the Pygmalion myth which stages an interaction between an art critic (played by you, the reader) and the statue-come-to-life, Galatea, who is on a pedestal in an gallery for animatronics. Her story unfolds as the player/art critic explores and engages her in "conversation." (The framework of this IF is common but Short's useage is highly innovative. The typical IF is more of a navigational adventure, exploring from room to room in a dungeon, etc.)

2. Exhibit: Interactive Fiction

Emily Short
Galatea
http://ifdb.tads.org/viewgame?id=urxrv27t7qtu52lb

3. Kinetic Text

Most simply defined, "Kinetic work is composed of moving images and/or text" (ELC 1) Kinetic or animated texts reinvigorate the interest in typography, design, and visual space that is associated with Concrete Poetry and organize a sequence of motions via a timeline. One successful web magazine of the early 2000s expressed the kinetic ethos aptly in its title "PoemsThatGo.com." (The site is still online but ceased publishing in 2003). Kinetic poems may require the reader to interact, evoking a gestural experience like writing (see Carrie Nolan Beech in New Media Poetics eds. Morris and Swiss) or create a more cinematic experience.

Many kinetic works have been created using software like Macromedia/Adobe Shockwave, Flash, or Java. Consequently, some classic works are difficult to access and have not been ported to contemporary systems. One representative work is Brian Kim Stefans, "Dream Life of Letters," which responds to an academic conference discussion by remixing key terms into an alphabetic dreamscape.

3. Exhibit: Kinetic Text

Brian Kim Stefans
Dream Life of Letters

http://collection.eliterature.org/1/works/stefans__the_dreamlife_of_letters.html

4. Generative Text

According to the Hayles et al., (editors of the ELit Collection Volume 1), generative texts are noted for "working and producing [text] in unique, unrepeatable ways. In experiencing a generative piece, the reader starts the process that results in the output, as opposed to watching a pre-prepared motion picture or selecting one of several pre-written texts to read." The best works give evidence of the procedure or algorithm at work behind the curtain which may be responsive to the reader, totally random, or informed by other variables. The now defunct "Hot Air" by Chris Ault, for example, took inspiration from Jeanette Winterson's _Sexing the Cherry_, and presented a cityscape made of words with word-smoke filtering up into the sky; the "content" of the piece, however, was not written by Ault but imported by dynamically accessing trending search terms from sites like Youtube, Delicious, and others.

A fundamental piece showing how even a simple algorithm can produce nearly unreproducible results, is Nanette Wild's playful "Storyland." Evoking a carnival theme, the piece generates an new flash fiction with each click of the mouse, using kitschy music to foreground rather than trying to disguise the structural pattern and formulaic logic producing it. (Informed by the Oulipo movement, generative digital texts have much in common with recent experiments in Conceptual Writing, though we might emphasize that procedures in a generative text are performed by the program, or by a program in conjunction with user interaction, and not by a writer alone).

4 Exhibit: Generative Text

Nanette Wild
Storyland
2002
http://collection.eliterature.org/1/works/wylde__storyland.html

Darius Kazemi
Two Headlines
Generative, Twitter Bot that remixes trending Google News headlines:
http://collection.eliterature.org/3/work.html?work=two-headlines

5. Locative

Locative texts "Refer[] to works that make use of locative technologies, such as GPS, Global Positioning System, a satellite navigation system, or RFID, Radio Frequency Identifiers, as part of their process." (ELC2)

Where Interactive Fiction or Hypertext may draw upon metaphors or invite users to visualize fictive spaces, locative Elit aims to place writing in relation to physical landscapes or geography. This can involve placing a reader in physical spaces to engage the work or projecting the work into geographic world.

J.R. Carpenter's "In Absentia" combines elements of hypertext narrative with the Google Map interface to explore gentrification in a Montreal neighborhood. The piece includes anecdotes written by Carpenter, contributions solicited from other writers living in the community, and images superimposed upon a satellite view of the neighborhood.

5. Exhibit: Locative Text

J.R. Carpenter
In Absentia
http://collection.eliterature.org/2/works/carpenter_inabsentia.html

Remix / Remediations

There is a broad range of works that could be classed as remix or remediation. ELC vols. 1 and 2 use the term "appropriation": "When the supply text for a piece is not composed by the authors, but rather collected or mined from online or print sources, it is appropriated. The result of appropriation may be a 'mashup,' a website or other piece of digital media that uses content from more than one source in a new configuration." Appropriation has a broader connotation beyond digital reuse, which may be why ELC volume 3 jettisons it in favor of "remix" for an appropriation that makes specific use of technology. And to introduce a final term, remediation involves the representation of one medium, within another, especially when that transfer is foregrounded rather than hidden. (See Bolter and Grusin, Remediation: Understanding New Media MIT: 1998).

Perhaps most approachable for readers new to digital literature is Allison Cliffords' "Sweet Old Etcetera," which presents a kind of interactive remediation of some highly visual e.e. Cummings' poems.

Nick Montfort and Stephanie Strickland have collaborated on a piece that is both generative and a remix, creating new text through an algorithmic manipulation of Melville's *Moby Dick* and Emily Dickinson's Poems.

Brian Kim Stefans' Star Wars is a minimalist, clever remediation of dialogue from the Star Wars movie.

6. Exhibit: Remix/ Remediation

Allison Clifford,
Sweet Old Etcetera (e.e. Cummings adapation)
2006
http://collection.eliterature.org/2/works/clifford_the_sweet_old_etcetera.html

Montfort, Strickland, (Melville, Dickinson)
Sea and Spar Between
http://collection.eliterature.org/3/work.html?work=sea-and-spar-between

Brian Kim Stefans
Start Wars, One Letter at a Time:
http://collection.eliterature.org/1/works/stefans__star_wars_one_letter_at_a_time.html

Teaching the Unfamiliar: Born Digital Texts

From first-year undergraduates to doctoral students, most of the students who enter my classes are encountering born digital literature for the first time. Many will bring significant gaming experience and a few will remember an early encounter with an adventure game reminiscent of interactive fiction -- but almost none will have encountered it within an English class or brought to bear the frames of interpretation, analysis, or aesthetics. Pedagogically, this creates a fascinating moment of defamiliarization, an open zone in which established reading patterns and cultural assumptions are put in abeyance while students consider what to make of this new and strange

This pedagogy is powerfully explored in an essay inspired by Emily Dickinson written by critic Jerome McGann with with poet Lisa Samuels. In "Deformance and Interpretation" (Radiant Textuality 105-135), they write: "To understand a work of art, interpreters [usually] try to close with a structure of thought that represents its essential idea(s)" (106) even though "poems lose their vital force when they succumb to familiarization." (109). In contrast, Dickinson suggests to them a deformative-performance of reading or a **"deformance"** that reflects a "protomodernist strategy of estrangement" (109). As a reading method applied to canonic literary texts, they propose

> "poetic deformations, which we have so far organized into four types: reordering (for example, reading backward), isolating (for example, reading only verbs or other parts of speech), altering (exteriorizing variants -- potential versions -- of words in the work; or altering the spatial organization, typography or punctuation of the work), and adding (perhaps the most subjective of our deformative poetics)." (McGann and Samuels, *Radiant Textuality* 117)

Effectively, then, in these first encounters with born digital literature, I'm suggesting that students are invited or seduced into comparably unfamiliar reading strategies.

So in the first encounter with "My Body," readers consider the non-identity of the works they and their classmates encountered. (It is almost impossible to know one has read every page/lexia of this hypertext, and the navigational interface encourages a kind of wandering and exploration; it introduces an element of indeterminacy, as reader rather than authorial choices collate a sequence of readings which provokes intriguing conversations about agency, voyeurism, and gender -- as readers must explore the body alongside the first-person narrator. In reading the generative "Storyland," students contemplate how such a transparent formula could produce meaningful texts. What about authorial intention? What kind of readerly pleasure emerges in the anticipation and fulfillment of expectation as the next story is recomputed for us? And so one with each of the varied examples....

Reading born digital literature alongside students -- at least for those of us whose teaching of literature is informed by formalism, post-structuralism, reader response, psychoanalysis, New Historicism-- often inspires exactly the level of reflective discussion that we dream about, doing so by stretching readers' senses of what literature can be.

Student Writing / Making Born Digital Literature

If I have persuaded you that reading Born Digital Literature can lead to a rich defamiliarization of the conventional English class, then I want to briefly double-down and suggest that students also be allowed / assigned the making of their own digital texts.

I first began offering students an option to complete creative digital activities (I called them "experiments"), in the context of a semester long course on Born Digital Literature. My own dabbling with HTML, Flash design, and PHP coding provided certain insights on what was going on "behind the screen" as I read certain digital literature, and I thought students might gain similar insights. Working with the Flash timeline and actionscript gives insight into the layering that takes place in Brian Kim Stefans "Dreamlife of Letter." Beginning to map a network of hypertext lexia using Twine opens up an appreciation for the different structures available in even simple linking. Depending on course course demands, student level, and other factors, these activities can be central or peripheral. They make take the form of independent mini-projects, loosely structured multimodal explorations, or media-specific projects completed by the whole class.

Subsequently, I had the chance to develop both an undergraduate Digital Writing course and a graduate-level Digital English course with production dimensions. There are certainly relevant materials in the field of rhetoric that articulate a rationale and methodology for writing with text, image, and sound. In Jason Palmieri's Remixing Composition: A History of Multimodal Writing Pedagogy (S Illinois UP, 2012), he demonstrates that multimodal composition predates the digital age; since the 1960s, he explains, "compositionists ... have taught alphabetic writing as an embodied multmodal process that share affinities with other forms of composing (visual, aural, spatial, gestural.) ... [R]espon[ing] to the 'new media' of their day... (5-6).

These issues seem to have less of a history in creative writing, but, in a 2013 College Literature essay, Adam Kohler makes what for me is a very persusasive argument for what he

calls "digital craft criticism"; he asserts that since literary genres are now "written and read--across different digital technologies" we need to help creative writing students reflect upon how "the materiality of the digital age affect[s] the literary artifact" (384). We recognize that

> "i***n the twenty-first century, obviously, poetry, short stories, and creative nonfiction live—are written and read—across our digital technologies."*** *But in what ways have their digital environments begun to affect them? What can creative writing studies help us understand about those effects?* ***And most important: how does writing "creatively" in digital spaces alter the act of composing "creatively"*** *and help teachers, writers, and scholars of creative writing (and composition studies) better theorize our current methods and practices? . . . .*
>
> *As many scholars working at the intersection of composition studies and new media have argued, the methodological complexity that emerges when examining the act of composing with new media provides scholars with the chance to reevaluate fundamental assumptions attendant to established methods. And in an era of blurred generic boundaries, multimedia storytelling, and open-source culture, creative writing scholars stand poised to consider the role that technology—and the creative writer's playful engagement with technology—has occupied in the evolution of its practices.* (Kohler, Adam. "Digitizing Craft: Creative Writing Studies and New Media: A Proposal. College English 75.4 March 2013.).

Kohler's framework helps to show how creative writers can deepen their appreciation for how language works with a material context that engages sight, sound, interaction.

As an academic who was primarily hired as a literature professor and who only occasionally teaches creative writing or workshop courses, I don't want to exceed my mandate in proposing how digital creative writing class should be taught. Instead, conclude by sharing a few examples of work students from a variety of courses have created in recent years. (Many of their pieces are emphemeral (posted on university blogs erased after they graduated, etc.) Some of these students were writing majors, others were not. To me, the fruit of their explorations makes a strong argument in and of itself. I count it as a success whether they ultimately move on to compose radical digital art or more familiar modes of fiction, poetry and essays "with an awareness of the limits and horizons that particular material conditions in digital environments make possible for imaginative texts" (Kohler 395)

Student Exhibits

http://sherwoodweb.org/Born-Digital-Pres/StudentWork/

Hypertext Andrew Chonoiski - Fallout (html) Tool: Twine http://twinery.org/
Interactive Fiction Eliza Albert - Seas of Astoria Website | Play in browser | Backup: Play | Walkthrough notes Tool: Inform 7 http://inform7.com/
Kinetic Melissa Clark - "In the Beginning" PDF Tool: Gimp https://www.gimp.org/ Derek Trimmer - "Fade" (SWF) Tool: Adobe Flash
Generative (Procedural) Text Anonymous student - "Seraphina" - Twitter: @writingremix https://twitter.com/WritingRemix
Locative Text Jessica Showalter Your Legs are Search Engines (PDF) Intro page: http://iupengl771.wikispaces.com/Your+Legs+Are+Search+Engines
Remix/Remediation Brian Humphreys - Oral Mashup (mp3) Brian Humphreys - Oral Poetry Remix (Critical Collage mp3) Tool: Audacity - http://www.audacityteam.org/

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A:

Key texts

include: Glazier Digital Poetics: The Making of E-poetries (Alabama 2001), Hayles Writing Machines (MIT: 2002), Funkhouser Prehistoric Digital Poetry An Archaeology of Forms, 1959-1995 (Alabama: 2007), Hayles Electronic Literature: New Horizons for the Literary (Notre Dame, 2008). **??? OTHER TO ADD???? Funkhouser, Siminoski, et al .....**

B:

Comment

On Feb 17, 2009, I commented online through the Poetry Foundation website: "This is an excellent overview cum manifesto for e-poetry, useful especially for writers and readers who may be unaware of all but a few special cases such as hypertext, or consider the digital as simply a "presentational" strategy for poetry. It echoes the "outreach" of recent books like N. Katherine Hayles' _Electronic Literature: New Horizons For The Literary_.

Deeper reading may also show some zones in need of qualification, beginning with the implicit notion that E-poetry is a singular mode or genre. There in fact a number of creative textual engagements with digital technology that could equally function under other rubrics such as hybrid writing, new media writing, digital performance and the like. In fact, e-poetries explore and call into question boundaries between kinds of media and traditional genres. So constituting a domain "Electronic literature" involves some trade-offs, including a diminishment of the place of border phenomena of the short showcased at sites like Rhizome.org

A single example must serve, item 1 - that e-poetry is created, preserved, and displayed on a computer. This omits, for instance, "flarf" poetry composed through google interactions with the web as source material, or oral performances based on computational texts. (It's worth noting that Hayles develops a contrary position in extending e-lit to print works that are mediated by digital technology in substantive ways)."

C:

Walkthrough for Eliza's Seas of Astorga

Seas of Astorga - Start

look at grandmother
take book
look at curio
look at grandmother
look at book
look at walls
go west
look at cabinet
look at koi
take compass
open cabinet
take compass
go west
look at koi
take koi
ask grandmother about book
go west