Intimate Mechanics: One Model of Electronic Literature

Stuart Moulthrop, University of Wisconsin-Milwaukee
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1.

Arguably even more than the literature of books and pages – itself an eminently complicated subject -- electronic writing presents an existential challenge. As Johanna Drucker points out, the most pressing question for this enterprise may well be ontological: *what is?* (See Drucker, 2013.) What can we mean when we think about electronic literature? This question applies not just generally but also in specific cases and practices. For works characterized by intensive, extensive, or otherwise flagrant variation, what can we mean by *the text*, or any primary subject of aesthetic and critical engagement? In efforts that complicate or efface notions of a "textual whole" (Eskelinen 2013, 70), how do we choose configurations of output to serve as representations of the work or objects or study? What fragments will we shore against ruins of our book-bound past, and which will we discard? To put the question most broadly, what do we think we're doing when we come to electronic literature?

One entirely plausible answer is to say that whatever we do it is not reading, because the vast expanse of electronic writing is that which cannot be read (Baldwin 2014, 18). In its massive potential for ongoing production, electronic discourse constitutes an autonomous or autotelic field of expression meant more to be than to be read: a "new illegible" made up of writing in, for, and increasingly machines (Goldsmith 2011, 159). While this attitude invites frank engagement with our cultural moment and promises further insights, it also raises an uncomfortable implication, namely that the term *electronic literature* may be at odds with itself, fundamentally ironic. *As if* we could still talk about letters, in the particular or the cultural sense, when really all we have are flickering signifiers, inconstant and multiplying representations of signs. *As if* such transcendental operations as the "count-as-one" could really help with works that mime infinity (Bogost, 2008, 11).

As a quintessentially two-faced trope, irony is never necessarily terminal, but at least potentially a way to rekindle discourse. For those of us who love procedurality, one twist of logic or rhetoric tends inevitably to invite another, raising the possibility of recursive or nested ironies: *as if(as if…)*. Anything you can do, I can do meta: as if we could still come at a subject like electronic literature without an intent to read. By virtue of this *mise en abîme* the illusion of the letter, and with it the mythology of a text, defies the condition of un-reading. All we need is a certain perversity or denial. Electronic literature ought to be nothing at all, a self-canceling proposition, and yet for a quarter century or more some of us have made it a cause, thing, an ongoing practice. Feeding back upon the irony of phantasmal letters, we carry on with reading, asserting both that it is possible to commit this act upon electronic texts, and further, that something useful can be said about the practice – that we can meaningfully read the situation of reading under electronic intervention. In doing so, we may speak (no doubt in different voices) about implications of the turn from inscribed content to processed data.

So this essay finds its way back to certain Fishy old questions about whether, where, and how our favorite class of literary productions might contain something like a text (see Fish, 1982). There are many ways to answer, including Fish's recourse to affective stylistics and communities of interpretation,

both of which bear on electronic work. This essay perversely takes a different path, one that bends instead toward materiality, formalism, and even taxonomy. Formal models are perhaps inevitably irritating, but sometimes the itch is worth scratching. This paper proposes one way of understanding a particular signature of electronic literature, through the balance or imbalance between latent and manifest aspects of the work – between what we see and what we might subsequently get though further operation of the system. The effort suggests one way of mapping electronic literature – and of course *only one way* – an experiment designed for controversy. Though it will certainly be possible to deprecate the model proposed here, finding its flaws will hopefully advance a larger consideration of what electronic literature means in our disruptive, recursively ironic, quasi-illegible moment.

2.

Whether we choose the capacious scope of the "born digital" in the mission statement of the Electronic Literature Organization, or N.K. Hayles' notion of an expanding technological "literary" (Hayles, 2008, 4), or the more abstract domain of Aarseth's "ergodic" (Aarseth, 1997, 1), mechanical or computational writing usually involves a bifurcated textual situation, consisting both of a manifest array of words and other signs (what Aarseth calls *scripton*) and a functionally prior, often invisible, sometimes inaccessible system, comprising data and generative logic (*texton*). So when I see on some screen:

> Tomorrow is another day.

I may actually be looking not at the personal expression of a certain writer, or even the corporate work of author and editor, but rather at the result of instructions submitted to a processor after having been composed in a notably different situation, for instance in some language like Twinescript:

> (either: "Tomorrow","Thursday","Eternity") is (either: "another","not a","arguably a") (either: "Wednesday","day","disappointment").

Which is to say that in cybertext any given expression is always an implicit index of alternatives not presently expressed:

> Thursday is not a Wednesday.
> Tomorrow is arguably a disappointment.
> Thursday is another Wednesday.
> Eternity is not a day.

What we see in any particular encounter is what the program yields only for a given iteration. So there is always more to cybertext than meets the momentary eye. Text implies context. In this example there are four words in the initial sentence, 14 in the revealed script, and 27 possible combinations of the terms. As we might paraphrase Hayles, the scriptonic dimension is relatively flat, while the textonic tends toward depth (see Hayles, 2004) -- or at least a folding-over or complication that suggests depth.

My lasting affection for scripton and texton, these twin, old-fashioned neologisms, demands at least explanation if not apology. Even their inventor no longer shares an attachment to these terms, having

long ago moved on to subtler and more sophisticated language. It may be that simple minds cleave to simplicity; or worse, this retrograde attachment may come down to nostalgia. I am perversely returning to a very early stage in our understanding of once-allegedly-new media, a moment in which I stubbornly find a sweet degree of clarity. I think there is good reason for this move but you may disagree. To be sure, backward hearkening should always be treated with suspicion, particularly in the old.

Something also needs to be said about the dualism of this binomial pair. Once upon a time, on an occasion for which I can no longer provide specifics, Hayles noted in some of my essays a tendency to slide away from any singular conclusion: a little too much of the hypertext writer, perhaps. In a moment of deep skepticism about false binaries I have come to understand her observation as praise. However, no such compliment can be paid to this essay, where I intend to be annoyingly insistent about the inherent dualism of electronic literature. Of course the texton/scripton binary can be falsified, both in its implicit differentiation of the electronic from pre-digital practices (all literature is deep) and in its application to newer practices (some code is actually quite shallow), to say nothing of its primary assertion – as we will see, there are important middle cases that blur the base distinction. Yet I do not think the asserted split between potentiality and expression can be dispensed with, however debatable it may be. We need to begin with integer values, zeroes and ones; though of course all absolute distinctions are subject to irony, as surely as falling bodies to gravity. Soon enough we will tumble into fractal ambiguities, but grant for a moment the illusion of distinction.

3.

As formal models go mine is very modest, with no multiple axes, intersecting circles, or semiotic squares. I am thinking about electronic literature as a continuum anchored by two poles, a simple line along which cases can be nominally arrayed. As always with such structures the most interesting instances lie between the extremes, and we will find our way to that middle space, but first we need to characterize the endpoints.

At one extreme of the line (bottom, left, *cis*, or however you choose to begin) are works that attempt to suppress texton in favor of scripton. In these works a body of writing is offered as either an equivalent to human authorship or literally as the work of some allegedly real individual. The attempt is Quixotic or ironic, since there is no question of succeeding, so these texts offer themselves naturally as extremities.

One early example of the type was *The Policeman's Beard is Half Constructed* (Chamberlain, 1984), a book featuring output from Racter, a text generator programmed in BASIC by William Chamberlain and Thomas Etter, early experimenters in linguistic computing. Far from trying to conceal machinic origins, Chamberlain credits the book to "the most highly developed artificial writer in the field of prose synthesis today." This attribution hides the fairly limited specifics of a primitive text generator -- running in 64 kilobytes of memory -- behind a myth of post-human competence. "Racter can write original work without promptings from a human operator," Chamberlain reports on the flyleaf. This may be loosely accurate, but the appropriateness of the word *write* is ultimately debatable. Cinematic tropes from *Tron* and *War Games* notwithstanding, no computer of 1984 could set out to compose a book. Racter provided various output files that were tuned, crafted, and framed by Chamberlain into a commercial product. Intended for a broad popular market, the book does not include source code for

Racter, though Chamberlain does offer a brief but interesting account of the compositional process. These notes aside, the book is playfully offered as *fait accompli*, the literary achievement of an "artificial writer."

An even clearer limit case arrived about a quarter century later with the notorious *Issue 1* hoax by Steven McLaughlin and Jim Carpenter (see Goldsmith, 2008). This work, distributed over the Internet in Portable Document Format, purports to be an anthology of poems from 3,164 human authors. In fact it is a collection of plausibly poetic texts generated by computer program. Now that the prank has been debunked, *Issue 1* seems only slightly different than *Policeman's Beard* – a work of machine output playfully or polemically passed off as conventional writing. In its initial presentation, however, the computational origins of the work were deliberately suppressed. Though the pretense was more concerted in this case, both *Issue 1* and *Policeman's Beard* feature artful misdirection or deception. Both projects eclipse an underlying logical procedure in favor of its output, elevating the scriptonic over the textonic. Acknowledging the element of pretense in these cases, we might call works of this sort *pseudo-literature*. They pretend to be something they are not, namely, the product of an older form of literary production which they disrupt or displace.

At the opposite end of the range are works with similarly vexed relations between texton and scripton, though in inverse relationship. In works of this type the product of linguistic computation is offered as an ostensibly readable text, but in circumstances that render engagement more or less irrelevant. It can be argued that in these cases the generative logic or underlying program becomes ultimately a primary focus of attention.

Perhaps the most definitive example of this type is Nick Montfort and Stephanie Strickland's *Sea and Spar Between* (2010), an elegant system that generates more than 227 trillion four-line stanzas by decomposing and re-mixing words sampled from the poems of Emily Dickinson and Herman Melville's *Moby-Dick*. Operating on the same ten-to-the-fourteenth scale as Raymond Queneau's *Cent mille milliards de poèmes* (1961), *Sea and Spar Between* combines the conceptual agenda of potential literature with the open-source ethos of software culture.

The work explicitly calls attention to the priority of texton over scripton. After the work's initial appearance, Montfort and Strickland published "Cut to Fit the Tool-Spun Course," a detailed annotation of the underlying code as an explicit invitation to later writers to continue their literary experiment:

> // Although our project mainly engages computation, two book-length works,
> // and the small-scale collaboration of two authors, we recognize the
> // potential of the network to foster different sorts of work and new,
> // radical collaborations. By offering *Sea and Spar Between* explicitly as
> // free software, we make it clear that authors and programmers can take from
> // it anything they find useful, just as we reworked and remixed *Moby-Dick*
> // with the poems of Emily Dickinson. (Montfort and Strickland, 2013, Lines 92-98)

Along with the genuine sincerity of this appeal for the freedom of software, there is also a certain irony involved. Though the authors offer their project as a new way to "read" traditional writing (lines 311-322), the subject of reading in this effort is notably complicated. The scriptonic output of *Sea and Spar Between* can be read, in the usual sense of the word, only in tiny, localized samples, and it is absolutely unreadable in any total sense. The fourteenth power of ten is in a literal sense extremely large, marking a limit of both human and mechanical capacity. Allowing a second or so for minimal scanning, to pass a human eye over every stanza would take millions of years. Likewise, at least for the moment, no text scaled in trillions can be feasibly treated in the aggregate *even by a computer*. If we postulate nothing more than processing and storing each possible stanza, a unit operation that might take a millisecond or two, a complete compilation would still take thousands of years. Like *Cent mille milliards de poèmes*, *Sea and Spar* seems designed to register the exhaustion that comes with possibility. It is the endless nightmare of completists, and in a sense the end of the line for a certain kind of reading. In fact, we are invited to step off that old line and onto a new one. The only way to come at the general properties of the work is to examine its underlying code, a fact clearly acknowledged in "Cut to Fit the Tool-Spun Course."

Even when the output text is held to more manageable terms, texton tends to dominate in works of this type. Montfort's generated novel *World Clock* (2014) contains a much more convenient array of 144,000 formulaic paragraphs, cut to a more generous yet recognizably tool-spun course:

> It is now as it happens 10:45 in the Vatican. In some decrepit yet nestlike edifice a person named Yonas, who is of completely average stature, reads a stained envelope. He frowns a slight frown.
>
> It is now precisely 11:46 in Kaliningrad. In some cookie-cutter yet decent accommodation an individual known as Kirubel, who is no larger or smaller than one would expect, reads a wrinkled contract. He chews a fingernail.
>
> It is now only a moment before 10:47 in Madrid. In some tidy residence a person named Mahlet, who is quite sizable and imposing, reads the warning message from a recipe clipping. She scratches one ear. (Montfort, 2014, 97)

And so on for many more pages. The underlying concept of this work is profoundly horological: each paragraph describes the action that unfolds in a particular point on Earth at one minute of a given day. There is a clockwork regularity to the paragraphs, which are all generated from a template that seems to go something like this:

> It is now [*adverb/phrase*] [*localized hour and minute*] in [*location*]. In some [*adjectival phrase*] [*kind of dwelling*] *[a or an*] [*word for human being*] [*participial adjective equivalent to* named] [*name*] [**reads** *some text*]. [*Personal pronoun*] [*second action*].

As in *Sea and Spar Between*, a trenchant irony is applied to the subject of reading. At every minute of Montfort's planetary day, someone somewhere reads something. The word *reads* occurs in the second sentence of every modular paragraph. And yet, what does it mean to read *World Clock*? A dedicated

researcher, or perhaps a crowd-sourced team, might plow through Montfort's text exhaustively. Yet aside from obsessiveness, the perversities of social media, or some kind of bet, it is hard to imagine a motive for this project. To someone versed in devious and paranoid fictions, a long read might be justified if one of the 144,000 paragraphs somehow broke from the generative algorithm, subtly or flagrantly. This lure could be even stronger if the book were produced in multiple, variant print runs; though it is easy to see how such a stunt might degenerate from the psychedelic spectrum of *Gravity's Rainbow* to a dismal Dan Brown.

In any event, Montfort was apparently uninterested in such material pranksterism and more concerned with an absolutely regular, world-spanning narrative. There would appear to be no anomalous minute in his World Reading Day. Thus the paragraphs of this scripton-novel are mainly of interest in the way they reveal the underlying structure of the algorithm, and like the swarming stanzas of *Sea and Spar Between*, they seem more textural than textual. The contents of the book may certainly be read in a conventional sense, but not likely. We can derive equivalent charm from scanning and sampling with no risk to overall understanding. The program code that governed output – or its basic scheme approximated in the sketch above – seems of greater salience than any particular expression it may produce. In fact, once we register the invariance of the word *reads* we have probably unpacked a large part of the book's message. This is not to deny the book's unique, odd charm, which may be easier to recognize if one is less attached to old ways of thinking.

We might call works at this end of our continuum *para-literature*, since they offer a text for understanding and manipulation (and indeed for derivative work), but this text is not the traditional *content* of the work, rather it is the code from which the output is generated. Again, the distinction between means and ends seems worth emphasizing. In many instances code is intelligible by humans and thus at least affiliated to natural language. Yet as Alexander Galloway observes, computer code is "hyperlinguistic," functionally and ontologically apart (Galloway 2004, 165). Unlike ordinary prose or poetry, which according to W.H. Auden "makes nothing happen" (Auden, 1979, 248), code implies all manner of happenings. Code is doomed to execution.

This is probably a good place once again to question the neat dualism of my linear array. Perhaps the line can be blurred. In the case of pseudo-literature, would the application of human editing render what I am calling scripton into something more like ordinary, hand-made writing? If scripton effaces texton completely, do we return to a more conventional scene of writing? Or to approach from the other direction, when the code of "Sea and Spar" is published, does texton become scripton? For that matter, assuming Mr. Auden knew a thing or two about irony, can we really say that poetry *hors d'ordinateur* makes nothing happen? Much depends on what we want to happen. In any event, these questions demonstrate that no dualism can stand. Nature abhors a vacuum (and, as we age, a synapse). Every binary is a lie. What matters is not so much the endpoints but the stretch of space they imply, with all those ambguous bits in between.

4.

So having entertained some debatable claims about extremes, we can now turn to the far more interesting middle space, where we find neither pseudo- nor para-literature but a diverse population of

works making up electronic literature as we generally know it. This domain comprises mixed cases where both scripton and texton exercise significant claim on readers' attention with neither completely displacing the other. There are of course many ways to embody this dynamic, and a truly comprehensive model of electronic literature would need to account for a very large number of variations. Since this model is meant primarily as a clay-pigeonish thought experiment, I will touch briefly on just a few.

Taroko Gorge, the oft-permuted poetry generator originated by Montfort and reworked by a growing list of co-conspirators, belongs to this middle region, though we may find it closer to the *para* than the *pseudo* end of the line. As with *Sea and Spar Between*, Montfort reveals and distributes his code and invites others to create new versions by altering the original data sets and/or generative logic. This procedure puts strong emphasis on the textonic, but each variation is strongly marked by subject or theme (postmodern theory, gourmandizing, Harry Potter slash fiction, Star Trek's George Takei, among others). Thus the scriptonic element retains significant interest even though the generator's unending operation ultimately inclines the reading experience strongly toward the textural. J.R. Carpenter's *Generation(s)* and Montfort's *#!*, collections of generated poetry that juxtapose scriptonic output with textonic instructions, offer code/poem diptychs that invite readers to consider both elements in parallel. They strike the balance between potential and expression with even sharper clarity.

Moving further still into the miscible middle we find works like Mez Breeze's *_cross.ova.ing][4rm.blog.2.log][_*, Talan Memmott's *Lexia to Perplexia*, and my own *Under Language*, where scriptonic expression fuses with the vocabulary and syntax of computational code. In these examples we might see an attempt to blur or collapse Aarseth's primal pair through verbal hybridization. (*Under Language* is designed to explore this hybridization.) Notably Memmott's work and my own also involve a repeated element of user selection or input, the "non-trivial" effort Aarseth called out as a major signature of cybertext. These works fuse texton and scripton by implicating both in an ongoing pattern of development, or in the somewhat dubious old term, interaction.

Introducing ergodic operation brings us to works in which the intercourse of expression and potential literally becomes a matter of play, even that kind of structured play called a game. While not all works in the promiscuous middle of electronic literature are identified as games, many are, from Jason Nelson's *Game Game Game and Again Game* to Mark Marino's *Living Will* and Emily Short's *Bronze*. If the point of a capacious middle space is variety, it may not be wise to look for a typifying case. There are many ways to occupy the zone between pseudo- and para-literature, and indeed not all of them involve game play or ergodics. However, the fusion of story and game seems particularly worthy of discussion, particularly as it is practiced in one of electronic literature's more recent arrivals, the growing array of Twine games. For the admittedly experimental purposes of this paper these games seem particularly significant – though that is hardly the limit of their importance.

Twine games are themselves fundamentally cross-bred, combining elements of hypertext, procedural fiction, and text adventure. Their base software, the open-source authoring system created by Chris Klimas in 2009, has many features of a hypertext platform, including node-to-node links and representation of textual structure by means of a directed graph. Twine games may be exported in a very popular hypertext format, as Javascript-enriched Hypertext Markup Language. However, many if

not most Twine writers think of their works not as hypertext fictions but as games – even perhaps contentiously as *videogames* -- thus the title of the important first compendium of Twine writing, Merritt Kopas' *Videogames for Humans* (Kopas, 2015). Thus also the acute and generally ugly controversy called Gamergate, which erupted out of a personal and professional dispute about *Depression Quest*, a Twine game by Zoe Quinn and Patrick Lindsey (see Hudson, 2014).

Though *Depression Quest* has received considerable attention, it is only one among many substantial examples of the form, which range from the visionary (Porpentine's *Howling Dogs*) to the polemical (Anna Anthropy's *Hunt for the Gay Planet*) to the satiric (Porpentine's *Ultra Business Tycoon III*). Contrasting Twine games to the kinetic, graphical, and generally violent entertainments most people associate with videogames, the game critic Cara Ellison suggests Twine works may allow us to explore "mechanics of intimacy," an approach to human experience not well served in the commercial mainstream (Hudson, 2014).

Deep explorations of conscience, consciousness, personal relations, and other matters plausibly associated with "intimacy" have been major literary concerns for a very long time, perhaps since the invention of writing. The "mechanics" by which these phenomena may be represented have seen considerable advancement from Sappho to Shakespeare to Kathy Acker. Even in the much younger area of electronic literature, there is a distinct history of works that pursue readerly encounters with textual others, from Steve Meretzky's *Mind Forever Voyaging* to Aaron Reed's *Blue Lacuna* in the interactive fiction field, and from Michael Joyce's *afternoon* to Deena Larsen's *Samplers* on the hypertext side of the house. Since Twine games inherit at least implicitly from both families, they seem indeed ideal venues for Ellison's mechanics of intimacy. Her concept could and should be the subject of further exploration in its own right. For purposes of this discussion, however, I will shirk that labor in favor of a problem more closely related to the dynamics of texton and scripton – a notion I call, with apologies to Ellison, the *intimacy of mechanics*.

With a certain risk of controversy, it is possible to see Twine games as an evolution from literary hypertext in the late 1980s. I make this claim with the understanding that Twine writers may neither invite nor accept the affiliation, since on occasion some of them have separated themselves from the earlier generation's ill-conceived embrace of academia and commercialism, and possibly some of our creative practices as well (see Porpentine, 2012 and Squinkifer, n.d.). In all sincerity, respect is always owed to those who want to re-write history and show the elders their mistakes. Art moves by difference. Still, there might be an instructive contrast between the Twine moment of the new century and what happened before. Hypertext writers once claimed of their work, "this is not a game" (McDaid, 1993); or more confusingly, "this is not not a game" (Moulthrop, 1999). In no such thrall to binaries, Twine writers dispense with these negations. Many of them believe they are making games even when in strictest terms they may not be. They are comfortable in their ludic identity even as they suffer outrageous attacks from those who would deny their right to play in game space. Twine writers like Porpentine, Anthropy, Quinn, and Kopas stand up to that pressure, often heroically.

This resistance is very important. Writing at the end of the previous century, Janet Murray described early experiments in digital literature, at least those that involved storytelling, as "incunabula" (Murray 1997, 66), characteristic of an infant art not yet out of its cradle. The Twine moment suggests a

measure of progress from this early stage -- at the very least a more upright and engaged posture. Shelley Jackson once memorably observed, "hypertext doesn't know where it's going" (Jackson, n.d.). She was talking about form and ethos, not cultural politics, though it is tempting to twist her words in that direction, if only to emphasize how much has changed. The writers who now build on hypertextual procedure have a much more definite agenda. They appear to know where they want to go, though the problem of making new art into a sustainable practice haunts them as much as it did their precursors. Their return to the story/game problem implies a working-through of earlier issues, if not clear dialectical progress. Their willing embrace of the ludic also signifies an ability to stand among and against hegemonic interests like the videogame industry.

Even as it brings controversy and calumny, the text-game insurgency also affords a clearer understanding of what is at stake in electronic literature. *Intimacy of mechanics* – the constitution of the work as a balance between the expressiveness of story and the logic of game – may be more than a willful distortion of Ellison's important phrase. Among other things, it suggest that what Alexander Galloway calls *allegorithm* may be as important in Twine games like *Howling Dogs* as in triple-A properties like *Civilization*. Considering the effects of that game, Galloway writes:

> The gamer is… learning, internalizing, and becoming intimate with a massive, multipart, global algorithm. To play the game means to play the code of the game. To win means to know the system. And thus to *interpret* a game means to interpret its algorithm (to discover its parallel "allegorithm"). (Galloway 2006, 90-91)

This insight offers an intriguing way to unpack the *intimacy of mechanics* as the cognitive response of a game player, or by extension any ergodic operator, to the constraints, affordances, and logics gradually made evident through repeated encounters. Galloway's fusion of allegory and algorithm points to what he calls an emergent "allegory of control" in digital media: "It is about knowing systems and knowing code, or, I should say, about knowing *the* system and knowing *the* code" (91). If we took this statement literally we would have to confine ourselves to para-literature, where *the* code dominates. But there are other possibilities for electronic literature just as there are for game design – other subjects of attention besides a specific body of code.

Very few players of *Civilization* ever see source code for the game, which for most versions remains protected intellectual property. Since they operate in a radically different, open-source context, the code bases of Twine games (and indeed of Twine itself) are much more readily accessible for those who wish to see them. Nonetheless, most players of a Twine game at least initially perceive the textonic mainly or wholly through variations of scripton. In *Howling Dogs*, for instance, we find ourselves repeatedly in a nightmarish place:

> A room of dark metal. Fluorescent lights embedded in the ceiling.
>
> The activity room is in the north wall. The lavatory entrance, west, next to the trash disposal and the nutrient dispensers. The sanity room is in the east wall.
>
> Her photograph is pinned to the side of your bunk. A red LCD reads 367 a few inches over.

As play unfolds, we learn that the "activity room" contains a hallucinogenic virtual-reality rig through which we can explore other narrative dimensions; but the device only becomes accessible if we first visit the "nutrient dispensers" and perform a fixed ritual of eating and drinking. We may also notice, after each session in the activity room, that the LCD display has advanced by one – registering another day in captivity, or in its allegorithmic reading, an iteration of the pattern of survival and impossible escape implicit in the carceral logic of the game.

Galloway's *allegorithm* and its implied allegory of control (what in another moment we might have called paranoia) raises intriguing possibilities for critical understanding of electronic literature. We might seek out various ways in which these works educate the reader about the linkage and interplay of story content and underlying logic, and how ludic imperatives of measured performance and differential outcomes shape an understanding of conditional structure and its possibilities. However, a direct application of Galloway's concept would implicitly equate certain kinds of electronic literature with games. As the Twine creators know, that identification may be dubious and is always fraught.

Even though they are called games, Twine works break in important ways from the mainstream market for routinized play. To continue with our example, *Howling Dogs* lacks many of the standard qualifications of a computer game. It has no overt scoring system. It has several conclusions or "final responses," in Montfort's term (Montfort 2007, 210), but these are not clearly demarcated as successful or unsuccessful. There are rules – the player must eat and drink before using the visor – but once we are off in psychedelic space, the experience is much more like literary hypertext than the more executive idiom of the adventure game. So while the general concept of the allegorithm may have some value for electronic literature, we should be wary of overly literal application.

There is also another major ground of difference between *Howling Dogs* and *Civilization*, or between Twine games and Triple-A commercial products. As Kopas points out in her introduction to *Videogames for Humans*, Twine is an invitingly intimate medium – and more than that: "Twine is unique because it is at once a medium, form, and community "(12). Further:

> [Twine's importance goes beyond the work produced by the most visible, recognized creators. Twine showed me that people who weren't interested in becoming "game developers" or "game designers" themselves could use games to tell important, personal stories. (8)

By contrast, it took a team of expert programmers and designers to create the original *Civilization.* Subsequent iterations of the game are the work of a small but robust studio backed by major corporate interests (Leonard Nimoy's voice-overs in *Civilization V* suggest a high level of production value, if not production budget). Twine games occupy a very different cultural universe:

> To see what's really exciting in videogames, we have to look at the fringes. From personal experiences of mental illness, to contracting with dark powers, to cruising at gay bars, to the adventures of space banditas in the far future and the experience of being a pregnant mermaid, the games in this book should be refreshing to anyone interested in the potential of interactive

> narrative but tired of games about grim antiheroes and Tolkien-obsessed fantasy settings. (Kopas 2015, 15)

In the way of interactive fictions before them, Twine games are often solo projects. Like hypertext fictions, they tend to be written by people "at the fringes" though in the hypertext days those margins were often just the hinterlands of academia. Twine writers tend to come from rougher patches of cultural turf defined by neural and sexual nonconformity, gender dysphoria, and that key front of cultural struggle that is queer identity.

As Kopas points out, Twine is an inviting, community-forming platform offering the possibility of expression and recognition, if not repair of the world. Basics of composition in Twine can be acquired in a few short sessions and further sophistication can be developed through experiment, practice, and robust online sources. In Twine games – as perhaps in other middle-cases along my continuum – the "allegory of control" may thus extend beyond cognition and recognition to active manipulation and authorship. To be sure, something similar happens in mainstream videogames through the practice of game modding, but generally speaking modding is more arduous than writing a ludic text in Twine. Twine games exemplify the intimacy of mechanics, and as both Kopas and Hudson point out, they suggest an emerging art practice that is much more invested in individual expression than in hierarchies of market-driven entertainment.

5.

There is to be sure a significant risk of misrepresentation in any selection from a diverse field of production, or indeed in setting boundaries for that field in the first place. This criticism could be applied both to the necessarily tiny sample of Twine output offered here, and more significantly to the focus on Twine games themselves. Concentrating on an intensively ergodic genre like turn-based games diverts attention from other works where user participation may be differently conceived. It also reflects a bias toward narrative that may need correction, since electronic literature contains a much wider diversity of genres and approaches. Can we find a place on the scriptonic-textonic spectrum for a work that is neither straightforwardly narrative nor conventionally ergodic? What could such a work reveal when set in contrast to Twine games?

For this final test case we might turn to David O'Reilly's taxonomically baffling effort, *Mountain* (O'Reilly, 2014). Placing this work on the electronic-literature spectrum may seem an odd move, but it is equally hard to place the product elsewhere, for instance in the design space of video games. O'Reilly is a digital animator known for simulations of videogames, and *Mountain* is distributed through independent-gaming channels, so the project has drawn attention from the game community – though mainly in the form of puzzlement. In a playful attempt to fit his work into commercial categories, O'Reilly lists its genre as "Mountain Simulator, Relax em' up, Art Horror etc " (O'Reilly, 2014). The last of these categories is pure invention, the second a parody of the *beat-em-up* genre that, while obscure, may not be entirely fictional (Bogost's *Slow Year* games are also quite mellow). Only the first is really meaningful -- though a case might be made for "etc."

Mountain is much more ontological than ludological. It simulates being a mountain, at least within a fantasy world reminiscent of certain Roger Dean prog-rock album covers from the 1970s. We are asked to identify with a stylized mountain floating in a bubble of air surrounded by outer space. What we do with this *mise-en-scene* takes some explaining. The program opens by asking us to draw free-form sketches in response to certain numinous prompts (e.g., "YOUR EARLIEST MEMORY"), but how this activity affects what follows – if at all – remains mysterious.

What follows in fact has more to do with Ellison's mechanics of intimacy (in a rather strange way) than it does with the non-intimate mechanics of ordinary games. We are asked to identify with a huge hunk of rock floating in space. However object-like, our mountainous avatar is nonetheless sentient. Apparently self-aware, Mountain may express itself in large block letters (e.g., "I'M DEEPLY CONNECTED WITH THIS BRILLIANT MORNING"; "I SEE MYSELF INSIDE THIS SWEET DAY"; "WHY AM I ALONE?"; "BOOORIINNG"). Since these statements appear typographically, the work qualifies at least minimally as electronic literature, perhaps as a strange second cousin of chatterbots. Though we might therefore ask how *Mountain* fits into the schema proposed here, we should probably first say a bit more about how the work fails to fit any model of a videogame. At one point in his essay about the program, Bogost notes that it is more like a (technically bad) screen saver than a game (Bogost, 2014). Indeed, using Bogost's interpretive framework of unit operations, we might say the unit operation of *Mountain* is something like *witness*, *empathize*, or most accurately, *exist*. The user/player can zoom and rotate the view. S/he can passively observe the passing of day-night cycles and seasons marked by snowfall and changes in the Mountain's population of trees. Mountainous musings can be elicited by pressing the period key. Otherwise, though, the user experience of *Mountain* is notably non-interactive. In some versions the software includes a menu item marked "CONTROLS," which brings up a screen that declares "NONE."

Mountain does contain certain possibilities for incident, if not narrative. The godlike Mountain ultimately proves mortal. Your avatar can and eventually will suffer some cosmic trauma and turn into dead rock. During its long simulated lifespan, your Mountain can also become the target of various gigantic objects – thumbtacks, paperclips, park benches, filing cabinets, coffee mugs, just to name a few – that come flying in from the void of space. Sometimes these objects simply sail by, but on occasion they will sink into the Mountainous soil and remain until displaced by other objects, or until they somehow subside or evaporate. Whether these occurrences form the basis of any kind of story is debatable. Is *stuff happens* a story? Can *exist* really be a unit operation? To the extent we are asked to identify with Mountain, it is perhaps a mechanic of intimacy – like the *tamagotchis* of old, *Mountain* tends to promote very long periods of intense attention. More important, though, the mysteries of being Mountain also bear upon the intimacy of mechanics. If the periodic bombardments of *Mountain* reveal no consoling thread of causality, they nonetheless motivate what may be for this paper the ultimate question:

Good question. Dubious claims to wisdom aside, our species might be more accurately named *Homo explicator*: given any kind of mystery we seek relentlessly for motive and mechanism. That is how we make gods out of mountains and dietary laws from bad experiences with shellfish, not to mention pogroms, witch-hunts, vaccine hysterias, and the Paleo diet. Art may indeed never be far from horror, especially when it touches human nature. *Mountain* is in its own way a videogame for humans, a curiously timeless, irrational void that incites the itch of reason. Where do all those things come from?

Various theories can be advanced about our Mountain's cascade of impactors, which tends to differ notably from session to session and player to player. Perhaps the software performs an inventory of our hard drive, yielding a preponderance of utilitarian objects if we store mainly e-mail and spreadsheets, or implements of play if we have a lot of games. (Who knows what will happen on a machine crammed with porn.) On the other hand, maybe the barrage of things is determined by those free-form drawings we create when the program launches. Just as plausibly the selection is more or less random. There is no way to falsify or verify any of these theories at the level of (quasi-) game play, and unlike in Twine games, underlying code is not ready to hand. We see what we see. Mountain exists and experiences. We share this experience with a certain intimacy for as long as the charm lasts.

Yet the question of origins -- WHERE DOES EVERYTHING COME FROM? – does have one obvious, inevitable answer in the field of electronic literature (and ergodic art in general): anything brought to

the screen as scripton arises from the textonic domain. Everything traces in some way back to code (or *the* code). So even an artwork that replaces the dire rationality of most computer games with zen-like meditation, a work that seems equally far from narrative and ergodic engagement, can still be understood as a curious negotiation between seen and unseen, between experience and underlying logics. As Bogost says after further reflection:

> The "you" in "you are mountain" doesn't refer to the terraformed 3-D game object, at all. Instead, it's the game itself. You are not mountain; rather, you are Mountain. You play as the abyss between the human and the alpine. (Bogost, 2015, pTk)

Mountain delivers a particular mechanic of object-oriented intimacy, and the intimate, undisclosed mechanics that animate the world of objects. It doesn't take a story-driven game or even a set of explicit puzzles to evoke this underlying principle. Wherever we find ourselves in the space of electronic literature, whether at scriptonic or textonic edges or more likely in the weird middle, the cosmogenic question is our surest guide. Where does everything come from? Look to the code, if you can find it. If you cannot, you might wonder why. What does it all mean? That answer can be found in the world of hierarchy and conflict, of art and horror, to which imagination is ultimately tethered. Go ask the Mountain.

WORKS CITED

Aarseth, Espen. *Cybertext: Perspectives on Ergodic Literature*. Baltimore, MD: John Hopkins University Press, 1997.

Anthropy, Anna. *The Hunt for the Gay Planet.* http://www.auntiepixelante.com/gayplanet/

Auden, Wystan Hugh. "In memory of WB Yeats." *Collected Poems* (1979): 247-49.

Baldwin, Charles. *The internet unconscious: on the subject of electronic literature*. Bloomsbury, 2015.

Bogost, Ian. *Unit operations: An approach to videogame criticism*. MIT Press, 2008.

Bogost, Ian. "You are Mountain." *The Atlantic* [online], July 17, 2014. Accessed June 26, 2016.

Bogost, Ian. *How to Talk About Videogames*. U. Minnesota Press, 2015.

Breeze, Mez. *_cross.ova.ing][4rm.blog.2.log][_. .*" In *Electronic Literature Collection, Volume 1*, edited by N. Hayles et al. Cambridge, MA: Electronic Literature Organization. http://collection.eliterature.org/1/ (accessed August 24, 2015).

Carpenter, J.R. *Generation(s)*. Traumawien, 2010.

Chamberlain, William. *The policeman's beard is half constructed*. Warner Books, 1984.

Drucker, Johanna. *What is? Nine epistemological essays*. Cuneiform Press, 2013.

Galloway, Alexander. *Gaming: Essays in Algorithmic Culture*. Minneapolis: U. Minnesota Press, 2006.

Galloway, Alexander. *Protocol: How Control Exists after Decentralization*. Cambridge: The MIT Press, 2004.

Goldsmith, Kenneth. "3,758 Page Pirated Poetry Anthology." *Poetry Foundation*. October 3, 2008. http://www.poetryfoundation.org/harriet/2008/10/3785-page-pirated-poetry-anthology/.

Goldsmith, Kenneth. *Uncreative writing: Managing language in the digital age*. Columbia University Press, 2011.

Hayles, N. Katherine. "Print is Flat, Code is Deep: The Importance of Media-Specific Analysis." *Poetics Today* 25.1 (2004): 67-90.

Hayles, N. Katherine. *Electronic Literature: New Horizons of the Literary*. South Bend, IN: Notre Dame University Press, 2008.

Hudson, Laura. “Twine, the Video-Game Technology for All.” *New York Times*. November 19, 2014. http://www.nytimes.com/2014/11/23/magazine/twine-the-video-game-technology-for-all.html?_r=0 (accessed August 5, 2015).

Jackson, Shelley. “Stitch Bitch: The Patchwork Girl.” *MIT Communications Forum* [undated]. http://web.mit.edu/comm-forum/papers/jackson.html.

Joyce, Michael. *Afternoon: a story*. Watertown, MA: Eastgate Systems, Inc., 1990.

Kopas, Merritt. *Videogames for Human: Twine Authors in Conversation*. New York: Instar Books, 2015.

Joyce, Michael. *Samplers: Nine Vicious Little Hypertexts*. Watertown, MA: Eastgate Systems, Inc., 2008.

Marino, Mark. *Living Will*. http://markcmarino.com/tales/livingwill.html.

McDaid, John. *Uncle Buddy’s Phantom Funhouse*. Watertown, MA: Eastgate Systems, Inc., 1993.

McLaughlin, Stephen and Jim Carpenter. *Issue 1*. Self-published, 2008. [No longer accessible on the Internet.]

Memmot, Talan. “Lexia to Perplexia.” In *Electronic Literature Collection, Volume 1*, edited by N. Hayles et al. Cambridge, MA: Electronic Literature Organization. http://collection.eliterature.org/1/ (accessed August 24, 2015).

Meretzky Steve. *A Mind Forever Voyaging*. Cambridge, MA: Infocom, 1985.

Montfort, Nick. “Toward a Theory of Interactive Fiction.” Archives & Social Studies: A Journal of Interdisciplinary Research. Vol. 1, no. 0 (March 2007). 193-235.

Montfort, Nick. *World Clock*. Cambridge, MA: Bad Quarto, 2014.

Montfort, Nick. *#!*. New York: Counterpath Press, 2014.

Montfort, Nick et al. *Taroko Gorge*. In *Electronic Literature Collection, Volume 3*, edited by L. Flores et al. Cambridge, MA: Electronic Literature Organization. http://collection.eliterature.org/3/ (Retrieved March 3, 2016).

Montfort, Nick and Stephanie Strickland. “Cut to Fit the Tool-Spun Course.” *Digital Humanities Quarterly*. 7.1 (2013) http://www.digitalhumanities.org/dhq/vol/7/1/000149/000149.html Retrieved March 3, 2016).

Montfort, Nick and Stephanie Strickland. “Sea and Spar Between.” *Dear Navigator* http://www.saic.edu/webspaces/portal/degrees_resources/departments/writing/DNSP11_SeaandSpar Between/ (Retrieved March 3, 2016).

Moulthrop, Stuart. "Reagan Library." *Gravitational Intrigue: A Little Magazine Publication."* Vol. 22cd.: May, 1999.

Moulthrop, Stuart. "Under Language." *Iowa Review Web*, Spring, 2008.

Murray, Janet. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York: Basic Books, 1997.

Nelson, Jason. "Game Game Game and Again Game." In *Electronic Literature Collection, Volume 2*, edited by L. Borras et al. Cambridge, MA: Electronic Literature Organization. http://collection.eliterature.org/2/ (accessed March 3, 2016).

Mountain. David O'Reilly. Steam. 2-14. Video game.

Porpentine. *Howling Dogs*. http://aliendovecote.com/uploads/twine/howling%20dogs.html#2m (accessed March 3, 2016).

Porpentine, *Ultra Business Tycoon III*. http://aliendovecote.com/uploads/twine/tycoon/crime.html (accessed March 3, 2016).

Porpentine, "Creation under capitalism and the Twine revolution," *Nightmare mode*, November 25, 2012.

Pressman, Jessica. "The Strategy of Digital Modernism: Young-Hae Chang Heavy Industries' *Dakota*." *Modern Fiction Studies* Volume 54, Number 2, Summer 2008. 302-326.

Squinkifer, Dietrich. "Quing's quest VII: the death of video games." Self-published: http://squinky.me/quing. Accessed June 26, 2016.

Queneau, Raymond. *Cent mille milliards de poèmes*. Gallimard, 1961.

Quinn, Zoe, Patrick Lindsey, and Isaac Schankler. *Depression Quest*. http://www.depressionquest.com/ (Retrieved March 3, 2016).

Racter [and William Chamberlain]. *The Policeman's Beard is Half Constructed: Computer Prose and Poetry by Racter*. New York: Warner Brothers, 1984.

Reed, Aaron A. *Blue Lacuna: An Interactive Novel*. http://blue-lacuna.textories.com/ (Retrieved March 3, 2016).

Short, Emily. "Savoir Faire." In *Electronic Literature Collection, Volume 1*, edited by N. Hayles et al. Cambridge, MA: Electronic Literature Organization. http://collection.eliterature.org/1/ (accessed March 3, 2016).

Young-Hae Chang Heavy Industries. Dakota. http://www.yhchang.com/DAKOTA.html (Retrieved March 3, 2016).