Loss Pequeño Glazier describes *White-Faced Bromeliads on 20 Hectares* (1999) as a “JavaScript investigation of literary variants with a new text generated every ten seconds.” This poem is divided into eight parts; each part consists of a title page with a photo and an 8, 9, or 10 line stanza. Here’s what makes it an e-poem: every 10 seconds, each line is randomly selected from two options in the code. This combination of scheduled and mutable\(^1\) text presents an interesting challenge for the reader, who cannot read a whole stanza before it changes.

How does a reader approach a shifting text like this? This combinatorial text is generated from its scripted possibilities, but the very conditions of its generation preclude the possibility of rereading the same linguistic text. Glazier retains control over the text and its behavior, providing his readers only with instructions/suggestions for reading his e-poem. Here are some recommendations of my own for reading this poem:

1. Follow the instructions and experience the poem as suggested by Glazier. Reread each stanza several times until you get a feel for it, and press on to the next sections.
2. Read each line carefully along with its preceding and following lines, seeking grammatical and syntactic connections between them, while waiting for its variant. Repeat the process for several cycles, seeking also connections between variants of the same line. Work your way down each line carefully until you have a clearer picture of how the stanza holds together grammatically, syntactically, and thematically.
3. Print out several variants in order to have some stable material texts and do close readings of them. Screen captures of the poem also work.
4. View the source code for the poem, which will reveal each variant and the programmed instructions that determine their behavior.

The first two reading options play along with the poet’s intentions for reading his work. Casual readers who are experiencing an e-poem for pleasure probably shouldn’t do the third and fourth steps, though I think there is pleasure in those steps. The third and fourth approaches subvert the poem’s programmed behaviors in order to have more control over the text. These methods are clear violations of the integrity of the work, bypassing its behaviors to better access its linguistic dataset.

This sets up an interesting dialectic between experiential and critical reading. While experiencing the e-poem as designed is important, I believe that a critic should use any tool

\(^1\) In my dissertation, *Typing the Dancing Signifier: Jim Andrews’ (Vis)Poetics*, I create a typology of textual behaviors exhibited by electronic texts: static, kinetic, responsive, mutable, scheduled, and aural.
available for further analysis. This approach is inspired by Jerome McGann and Lisa Samuels’ notion of “deformative criticism” which uses nontraditional analytical methods to achieve insight: “the critical and interpretive question is not ‘what does the poem mean?’ but ‘how do we release or expose the poem’s possibilities of meaning?’” To expose the possibilities, I examine the poem first as a type of “first generation electronic object” identifying the type of object it is and figuring out what access it provides to its source code. If it’s an open source work, then I generally take a look at the code and see what insights it has to offer. If the code isn’t available, then I try to figure out its algorithms and datasets: the logic and data layers that inform the presentation layer—or what we see on the screen. This type of analysis is aligned with the practices of Critical Code Studies, which seeks to “reflect on the relationships between the code itself, the coding architecture, the functioning of the code, and specific programming choices or expressions, to that which it acts upon, outputs, processes, and represents” (Marino), though for this essay, the readings of code are primarily functional. The code, whether available or not, is an essential part of an electronic text because it contains the instructions for the computer’s software and hardware components to present the text to its readers. The interest in the code also responds to Hayles’ call for “media-specific analysis” which focuses attention on the materiality of a work as “a dynamic quality that emerges from the interplay between the text as a physical artifact, its conceptual content, and the interpretive activities of readers and writers” (Hayles 72).

All of these methodologies come together under the practice of close reading, but one that is updated by being attuned to the materiality of electronic texts. To perform a close reading of an electronic text, one should include source code (if available) because the instructions for the display of the text—its linguistic text, appearance, and behaviors—are defined within. Reading the presentation layer of the text must suffice if the code isn’t available, but awareness of the kind of first generation electronic object it is can provide insight on its capabilities and limitations. Close reading itself is a methodology that has come under question in the past few decades, particularly as practiced by the New Critics, but it is reemerging as an important critical practice, as discussed by Simanowsky in his new book, Digital Art and Meaning.

The valid message of Sontag, Lyotard, and Gumbrecht is that one should not resist the physical and aesthetic pleasure of an artwork, thus reducing its energy, vitality, and expressiveness to a particular proposition. However, although art must not be reduced to ideas, one also should not avoid ideas when talking about art. Although attention should be paid to the sensual aspect of objects, it should also be paid to their possible deeper meaning (18).

In aligning myself with Simanowsky’s position, I must add that my interest isn’t in subverting the experience of of a work that a poet such as Glazier has labored to design, nor to reduce its possibilities to a single interpretation. The interest is to appreciate the artistry that inheres in the code, in its logical architecture, in its datasets. This is as much a part of the work as what is displayed in the screen when the code is executed.

How does one approach such a text? Aside from the difficulty of performing a close reading of a text that changes every 10 seconds, one must consider the volume of possible variants of text: which is either 4,342 or 2.36 x 10^{21} (sextillion) distinct textual

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2 Matthew Kirschenbaum defines such an object as “one that enjoys no material existence outside of the electronic environment of a computational file system” (20).

3 In Chapter 2 of my dissertation, I develop and discuss a typology of textual behaviors in electronic documents: static, kinetic, scheduled, mutable, responsive, and aural (26).
permutations of the poem, depending on whether we treat each excerpt as a poem (in a
series of 8 poems) or a stanza (in a 71 line poem). Obviously, to attempt a close reading of
all the versions is absurd, since simply reading all the variants would require an excessive
amount of time, especially considering that Glazier’s poem doesn’t allow control over the
permutations or sufficient time to read them. This kind of literary work is designed to
subvert line-by-line explication de texte.

Yet there is hope for the explication of such a vexing literary object. Close attention
to the text does yield results, if one focuses on identifying patterns that emerge from the
variations. It is also important to interpret the scheduled mutability as signifying strategies
for the poem. Finally, since the poem is an HTML document with JavaScript programming,
we can access the source code to see all the variant lines and codes that determine textual
appearance and behavior, making its analysis much more practical.

In order to facilitate my close reading of the textual dataset, I cut and pasted each
variant line into a word processor, organizing them by stanza, so I could read all of the
poem’s textons. This allowed me to identify three patterns within the paired alternate
lines.

1. Most alternate lines have a complete phrase between them, at times with strong
   enjambment. The same is true of the second of the paired alternate lines and the first
   alternate of the following line. Let’s take a close look at the first three alternate lines of
   the first stanza as they appear in the source code:

   a1[0] = "'Three simple words: crack dot com.' Ambience or confrontation."
a1[1] = "I’m sure there is a white house hand in there somewhere. 'Colonia'"
a2[0] = "as in that sense of 'colonial'. Path of obstruction. Call now to start"
a2[1] = "your personal relation with God. Do you mind if I slip into"
a3[0] = "something more comfortable? Like what? Another URL. The"
a3[1] = "original dream boat, the Big Mac. Keeping one eye on the clock and"

   The variables are determined at the beginning of each line in the source code: a1, a2,
a3 refer to the line number, while [0] and [1] are the values assigned to each alternate
line. Thus, the first two lines in the quote above are the alternates for line 1. All of
these lines, except for the first one, are open and have strong enjambment with the
line that follows. However, the fact that only one of each pair is displayed at any given
time to undercuts their continuity. Thus, these lines could be displayed as follows:

   I’m sure there is a white house hand in there somewhere. 'Colonia'
as in that sense of 'colonial'. Path of obstruction. Call now to start
something more comfortable? Like what? Another URL. The

4 Espen Aarseth defines textons as “strings [of signs] as they appear in the text” which are
combined to produce scriptons, which are “strings as they appear to readers” (62).
5 Compiled from the source code of the first stanza:
http://wings.buffalo.edu/epc/authors/glazier/java/costa1/01.html
6 This example is a deformation of the original text because its behaviors have been stripped
from it: it will remain as a static text in this document. If I wanted to quote the poem more
accurately, I would have to include the code and execute it within my own text.
With this design Glazier intends to create a sense of fragmentation that points towards cohesion in the reader’s mind. By scheduling the changes he is able to have lines connect, at times with the preceding line, at times with the following one. The contrast between the almost commanding statement that begins at the end of line 2 and the question that it changes into at the beginning of the next makes the reader pay closer attention to the lines, and want to make sense of it. The mind cannot help trying to make sense of this language, especially when it *almost* makes sense. Besides, these combinations are not accidental: the poem is designed to create them, as the next pattern will demonstrate.

2. Many alternate lines are parallel to each other: they have different statements and are not connected by anything other than the fact that they are paired. Some are similar enough that they contrast in interesting ways, and I believe they are placed that way to highlight their distinct ideas. The first line of the second stanza is an example of this, and addresses the question of broken syntax throughout the poem.

   a1[0] = "It’s an inter-text. Its inherent collapse of serial syntax. It’s not what "
   a1[1] = "It’s an inter-text, an inherent collapse in serialized syntax. It’s not what "

Each line alternate has a variation that may escape attention during an initial reading because the differences are visually minimal, and the reader’s attention is directed towards the poem’s visual materiality by the scheduling, which will give the illusion of the line shrinking or expanding. This material similarity focuses the reader’s attention on the differences between the alternate lines.

- The first alternate line begins with the sentence “It’s an inter-text.” The pronoun “it” in this sentence refers to the poem itself and the fact that exists between texts—its alternate lines. This inter-text has a built in (“inherent”) breakdown (“collapse”) of sequential (“serial”) syntax—as was demonstrated in the previous discussion of alternate lines. To prove its point, the line ends with an incomplete phrase “Its not what” that doesn’t connect with the next line syntactically, no matter which alternate it is.
- The second alternate statement combines the initial sentence with the second to create a different statement. The pronoun still refers to the poem, but this time it is saying that the poem is two things: (1) an inter-text, as in the first statement, and (2) the speaker’s collapse in sequential (“serialized”) syntax, referring to the scheduled syntactical changes of the text. This statement points at a key element for interpreting the poem: the speaker’s mental state.

3. The third type of paired alternate lines occurs only six times: each pair of lines is identical, so that no matter the changes, those lines remain the same. These lines are:

   Part 3, line 3: “We’re the Glazier family, we eat what we want, anytime we want.”
   Part 3, line 8: “Spanish, the only language better than UNIX. Keep an eye out for it.”
   Part 5, line 9: “bathe in the river heated by the lava’s flow. Pura vida, compita.”
   Part 6, line 8[0]: “green sunlight-*sucking* iguanas form a canopy above the trees.”
Part 6, line 8[1]: “green sunlight-seeking iguanas form a canopy above the trees.”
Part 8, line 4: “Toucan at last! Fingers arched so, international symbol for toucan.”

These lines are significant because they highlight important moments for the speaker in the poem’s narrative. They are impressions that are not lost in the ever-shifting lines of the e-poem—or in the mindset of the speaker. Their impact will become clear in the subsequent discussion of language choices throughout the poem.

This close reading of the poem’s textons would be extremely impractical to carry out of only working with the display text, though a reader might find similar patterns. Now to how do these patterns inform an interpretation?

_White-Faced Bromeliads_ explores the speaker’s consciousness during a trip to Costa Rica, tracking his changing attitudes, thoughts and experiences throughout the poem. The poem creates stream of consciousness through rapid scheduling of changing lines, which affect syntactical and grammatical structure. Each line is a snapshot of the mind of the speaker, who stanza by stanza progresses from academic, technological and political concerns to becoming immersed in the experience of traveling in Costa Rica: its food, drink, people, natural beauty, flora, and fauna. An examination of word choices and imagery from each stanza should provide ample evidence of the speaker’s shifting mindset.

The first alternate line of the first stanza sets the tone for the entire poem "'Three simple words: crack dot com.' Ambience or confrontation." It establishes the decision the speaker needs to make in this trip: whether to surrender to the pleasures of the ambience of Costa Rica and its natural beauty, or remain engaged in the mental confrontation with his everyday world. These two things battle for the speaker’s attention. On the one hand, he is thinking of work, programming, coding HTML, and so on, while the trip and the natural beauty of Costa Rica is slowly taking over his mind. The first four stanzas contain abundant references to websites, HTML, languages, resumes, and other elements of a hectic professional life, which combined the types of comments made by the speaker point at an initially stressed state of mind. Some phrases along this vein stand out: “HTML as the world’s dominant language”, “delay stealing beauty”, and “Can’t recall one thing I ate in quetzal.” He is certainly not enjoying himself yet: his mind is on his work, but not for long.

With each stanza, there are more references to Costa Rica and its nature and fewer references to technology that appear in the first four stanzas. For instance, descriptions of food abound throughout the poem, but there seems to be more pleasure (and more food) in the second half of the poem. This seems to be a source of confrontation in the first half of the poem, as can be seen in the third line of the third stanza (one of the few unchanging lines in the poem), “We’re the Glazier family, we eat what we want, anytime we want.” This line is in ironic contrast with line 5 of the fourth stanza, “Neglected to calculate the whole

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7 I have included the variants on part 6, line 8 in this category and highlighted the changed word because I do not consider the differences significant towards this interpretation of the poem. It could be a crucial detail in another interpretation of the work.
8 [www.crack.com](http://www.crack.com) was the URL for a small company that designed first-person shooter videogames. This is a gaming genre which allows for a player to immerse themselves in a virtual environment and shoot at bots or other players.
day bus trip in there. I have yet to eat in Costa Rica” and the last line of the same stanza, “Spontaneously adjust to the fact of a five hour tortuous trip into the many storied jungle all foliage cloud verdure.” The last four stanzas are full of pleasurable food and drink descriptions and experiences, such as “Banana chips on the bus. Una casada, comida tipica,/Egg, potato salad, plantain, white rice, black beans, garlic toast, /cheese, meat.” (stanza 5, lines 6[1], 7[0] and 7[1]). Some local drinks are mentioned in stanzas 7 “agua sapo” and 8 “Huiscojol sap liquor called C.R. wine for its reoccurring effect.” There is no confrontation left in the speaker by this point in the poem: he is thoroughly enjoying himself in the ambience of tropical Costa Rica, as evidenced by the last line of stanza 5, “bathe in the river heated by the lava’s flow. Pura vida, compita.” (Pure life, compita). The technological terms have been replaced by bird and plant names, as is underscored in another of the few unchanging lines in the poem, “robin. Mirlo Pardo. Yiguirre. Bosque Lluvioso. Sloth glazier.” (stanza 8, line 9). The confrontational attitude is also gone, “Mucho gusto” (stanza 8, line 7[0]) is a greeting given when one meets someone, which means “Great pleasure [to meet you]” By the end of the poem, the speaker’s mindset has changed completely: his lexicon, attitudes and outlook.

The speaker’s mental transformation throughout the poem is a result not only of language choices, but also of the scheduling and mutability behaviors exhibited by the e-poem. The rapid scheduling of changes has the effect of mimicking the speaker’s mental hyperactivity, attention to detail, and the relentless shifting of his stream of consciousness. The times when there are no line changes—or even minimal changes—serve to highlight important moments during the trip that cause a notable impression on the speaker’s ever-shifting mind. And certainly, the scheduled changes in the randomly displayed lines are also designed to keep the readers from getting too wrapped up in syntax, grammar, and narrative. Perhaps it is to recreate the speaker’s mindset in the reader, who can follow in his mental travels through tropical Costa Rica, leaving behind the technological world. As the reader becomes accustomed to the text, stanza by stanza, she can become accustomed to the poem’s design, and the awareness of computers and programming fades, echoing again the speakers’ stream of consciousness.

The pleasure of White-Faced Bromeliads is in figuring it out, in sensing how the ever-shifting torrent of language coming towards the reader gradually shifts. There is no need to read code to enjoy this work or even to produce a sophisticated interpretation: the poem itself offers everything needed for those purposes. But there is pleasure and insight in the source code, which is a part of the text, after all.

Works Cited


Appendix: Dataset for White-Faced Bromeliads on 20 Hectares

Uno: Aztec flowers. Can’t recall one thing I ate in quetzal.

a1[0] = "'Three simple words: crack dot com.' Ambience or confrontation."
a1[1] = "I'm sure there is a white house hand in there somewhere. 'Colonial'"
a2[0] = "as in that sense of 'colonial'. Path of obstruction. Call now to start"
a2[1] = "your personal relation with God. Do you mind if I slip into"
a3[0] = "something more comfortable? Like what? Another URL. The"
a3[1] = "original dream boat, the Big Mac. Keeping one eye on the clock and"
a4[0] = "another on the constitution. A little eye wash for your public"
a4[1] = "underscore html. A guidebook called How to Write Whining"
a5[0] = "Resumes. HTML as the world’s dominant language. As in, write"
a5[1] = "me at glazier at ak-soo. Well, I bet it has something to do with"
a6[0] = "Nahuatl. Po cenotes. Act of Tejánísimo. 'You speak so many"
a6[1] = "bloody languages and yet you never want to talk.' Even after a"
a7[0] = "metal models of now-healed body parts offered at the shrine"
a7[1] = "delay stealing beauty. No 'sacrament of the word' in Media"
a8[0] = "Cartago. A statue of the Virgin wistfully reappeared on August 2, 1635."
a8[1] = "room mansion. Aztec flowers. Can’t recall one thing I ate in quetzal."

Dos: What confusing and mazing things sentences are

a1[0] = "It's an inter-text. Its inherent collapse of serial syntax. It's not what"
a1[1] = "It's an inter-text, an inherent collapse in serialized syntax. It's not what"
a2[0] = "Icon going over a barrel over Saigon falls. The images she'll never"
a2[1] = "escapes are those of the icon Tanya. Morning in America"
a3[0] = "according to a notable campaign slogan. We'll have a couple of"
a3[1] = "flurries for breakfast. Files containing text loss investigators. not"
a4[0] = "doing well in a Goldilocks economy. People are willing to pay for"
a4[1] = "an Ivy League egg. 'For every man in my life I have a new scent.'"
a5[0] = "What confusing and mazing things sentences are'. I con, I can, I"
a5[1] = "cheat icons. As a shortcut, I speak through the ventriloquist. 'He"
a6[0] = "did not have a clear impression of water cress.' I will now toss"
a6[1] = "myself out loud. 'A cash register with lady bugs, gone.' Lost"
a7[0] = "gloss of Los Angeles, Los Alamos, as it appears in One-Eyed Buttercups."
Tres: volcano, my cactus studded slopes

Cuatro: Caribeño, bananas. fronds. ¡Es la Fortuna!
Cinco: a pumpkin seed in your vocabulary

a1[0] = "Children & houses dotting coffee bean fields people parados"
a1[1] = "parada de pie paraderos lemons rusting Escuela Republica de cuba"
a2[0] = "tin tobacco fields melon mounds boys get on bus to sell chips, pan"
a2[1] = "de pachuerre buying every bread that passes arboles de figuras"
a3[0] = "flores de queso. Stories with nothing but bananas. Bazar Anny"
a3[1] = "¡jálela, ¡jálela! proyecto de Lombricultura. Escuela Zapate"
a4[0] = "(Botany) rockrose. 2. (arma) dart. Finding a pumpkin seed in your"
a4[1] = "pastry. Inhabiting a home. Inside in the shade humans want"
a5[0] = "vocabulary. A dead tree becomes a bromeliad altar. Policía Rural"
a5[1] = "Sucre. Towards the volcano in palm villages egrets chased humped"
a6[0] = "Brahmin cattle. Los Angeles, Costa Rica’s fresh furrows against"
a6[1] = "smoky ridge. Banana chips on the bus. Una casada, comida típica"
a7[0] = "Egg, potato salad, plantain, white rice, black beans, garlic toast"
a7[1] = "cheese, meat. It's only for about an hour a night that you can see it"
a8[0] = "lava gushing glowing in twilight plumes & sputters. Before sunset"
a8[1] = "it's too light to see the glow and after, the clouds rush in. After you"
a9[0] = "bathe in the river heated by the lava’s flow. Pura vida, compita"
a9[1] = "bathe in the river heated by the lava’s flow. Pura vida, compita"

Seis: Turn bright papayas upon tree stalks

a1[0] = "Buzz-dived by 6 a.m. hummingbirds chirrups volcano with shroud"
a1[1] = "of elusive quetzal. Tropical mountains rising Tahitian ridged green"
a2[0] = "Renamed 'Fortuna' ('Luck') when it was the only town left after"
a2[1] = "the 1968 eruption. Everything jumping by 7 am, 37¢ coffee"
a3[0] = "Reading the Pre-Socratics in Havana. Who just came down here"
a3[1] = "six years ago and never left, leggotts, open waisted, fresh-washed"
a4[0] = "canary scent. The eggs with salt, black-sugared coffee, how it"
a4[1] = "comes. Past casaba (yucca) eat the root not the tree to Los Chiles"
a5[0] = "Did you have a chance to see the volcano last night? Pendulous"
a5[1] = "Black ash of the sugar cane. Dried pulp firewood. Turn bright"
a6[0] = "papayas upon tree stalks in front of sugar cane fields. The sap can"
a6[1] = "burn your lips savia blanca de la papaya. Ginger plantations with"
a7[0] = "red and white flowers, putting pineapple peels in water with sugar"
a7[1] = "3 or 4 days for a potent licor de pina. El Flechazo's hundreds of"
a8[0] = "green sunlight-sucking iguanas form a canopy above the trees"
a8[1] = "green sunlight-seeking iguanas form a canopy above the trees"
a9[0] = "orange in the mating season. Behind the hibiscus head is an orange grove"
a9[1] = "needs water. Only Indians allowed to eat iguanas. Nicaraguan cane cutters"
Siete: Monkeys tried to go to the bathroom on us. (10 lines)

a1[0] = "Live fence. From a concrete post we cannot get anything. Oxen "
a1[1] = "pulling around and around. Days of only brown sugar. The most "
a2[0] = "typical Costa Rican drink is called 'sweet water'. Agua sapo, "
a2[1] = "water frog, is sweet water served cold with ginger and lemon, "
a3[0] = "particularly in the heat of the Caribbean coast. La burla y la ironía. "
a3[1] = "I would like to show you the way from La Fortuna to Los Chiles. "
a4[0] = "Tico Fruit Finca Cinco. Banana plantations. Despacio. 52 Cabo "
a4[1] = "Blanco. Those are paper trees. They are working on banana paper, "
a5[0] = "coffee paper, and tobacco paper. Arbol de almendra. We were "
a5[1] = "attacked by monkeys. The volcano, its potential for instant "
a6[0] = "annihilation veiled by habit. Howler, Spider, & White-faced. Tree "
a7[0] = "1948. Monkeys tried to go to the bathroom on us. Uns secuestra. "
a8[0] = "de Petra. ¿Con quién tenemos el gusto? Un montón de saludos. "
a8[1] = "Araceli. Chickens, a tin shack, white-humped cows, egrets. "
a9[0] = "Deaglan O dragonflies whose love of birds sleep hummingbirds. "
a9[1] = "Don't drink more than you can sweat out. Green back heron. "
a9[0] = "Anhinga (snake bird). Wood storks. Flurry of long nosed-bat."

Ocho: Blue egret. Green kingfisher dives. Manakin, trogon (10 lines)

a1[0] = "A Jesus Christ lizard on the basilica. Bats take off. Rio Frio’s green "
a1[1] = "current. Mangrove swallows. Thanks to the angle in the bookstore. "
a2[0] = "A sudden downpour -- that's why they call it a rain forest. Snowy "
a2[1] = "egret black bill yellow feet. Blue-bodied Amazon kingfisher "
a3[0] = "fishing. Blue egret. Green kingfisher dives. Manakin, trogon, "
a3[1] = "Guanacaste, the unglamorous national tree, resplendent quetzal. "
a4[0] = "Toucan at last! Fingers arched so, international symbol for toucan."
a4[1] = "Toucan at last! Fingers arched so, international symbol for toucan."
a5[0] = "Cuarto No. 5. Plate 20, No. 5, Great Patou pájaro estaco. I love that."
a5[1] = "white face holding on with his tail. Undersides of iguanas in trees."
a6[0] = "Huiscojol sap liquor called C.R. wine for its reoccurring effect."
a6[1] = "Picnic lunch under ceba. Don't ever sacrifice a good story for the "
a7[0] = "truth. Good bye world I’m off to Gort. Gracias. Much gusto. I had a "
a7[1] = "good day, I put a comma in. '¡Pura vida!' ¡Que Tico es él!' "
a8[0] = "Zanate o clarinero grande. Black and rich sound como clarinete."
a8[1] = "Bonito. Rico. 400 if you zoom. The modest national clay-colored"
a9[0] = "Sleeping hummingbird which doesn't wake even to a flash in volcanic night."
a9[1] = "Red flash of social flycatcher’s yellow breast. Three camens there."