SPARS OF LANGUAGE LOST AT SEA

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Our poetry generator, *Sea and Spar Between*, was fashioned based on Emily Dickinson's poems and Herman Melville's *Moby-Dick.* Both in its original edition and in the edition expanded with comments—*cut to fit the toolspun course*—it exemplifies seven different ways to seek and grasp text: 1) by porting code; 2) by translating text strings and processes; 3) by contrasting the page/canvas experience via a link or URL with the experience of reading code via "View Source"; 4) by harpooning a particular stanza and using the browser's capability for bookmarking; 5) by creating human-readable glosses of code for readers who may not identify as programmers; 6) by relating its depthless virtual space to the import of Mallarmé's *Coup de dés* as interpreted by Quentin Meillassoux; 7) by foregrounding non-translatability as a characterizing sieve for natural languages.[1]

1. Ports at Sea

Sea and Spar Between is implemented, as published, in HTML with JavaScript, but it was first programmed in Python. Though the use of HTML5's canvas, manipulated by JavaScript, was envisioned early in our process as the means to provide easy access over the Web on a wide variety of platforms, including mobile phones ("the more convenient / To Carry in the Hand —"), we selected Python for the initial development of the poetry generator. This language provides for exploration and play, an ability to build on smaller-scale work to develop larger-scale projects, and it allowed us to sketch the program and generate stanzas quickly. *Sea and Spar Between* was first presented, in its Python in-progress version, in the Purple Blurb series at MIT in March 2010.

Just as artists use different media for sketching and for executing final work, it is not unusual to prototype or try out an idea in one programming language and then complete the program in another. Ports, which are often (but not always) undertaken after the release of a program, are analogous to translations, although the carrying across is from one programming language or platform to another, not between natural languages. Since different programming languages make certain styles of programming easier or harder, and since they afford and constrain the programmer in different ways, it is quite reasonable to look for connections between a computational work and the programming language in which it was developed. In the case of *Sea and Spar Between,* however, it would be a mistake to try to relate

the core functioning of the generator to what JavaScript makes difficult or easy, because the initial development of the generator, and how it produces lines and stanzas, was not done in that language.

2. Translating Strings and Processes

To translate any work of electronic literature from one natural language to another, the text must, as with traditional literary translation, be carried across. However, in the case of systems that involve computation, and particularly those in which computation and language engage significantly with one another, it is often necessary to translate code and processes as well. For instance, grammatical features such as agreement in gender are not computationally modeled in the original *Sea and Spar Between*. However, in the Polish translation by our fellow panelists Monika Gorska-Olesinska and Mariusz Pisarski, the most straightforward way to translate the system involved changes to data structures and code to allow the generation of appropriate Polish texts. When non-ASCII characters are required but not provided by the original structure, as also happened in this translation project, further programming and computational work is required. It is almost always the case when language engages with computation at the line/sentence, word, or letter level, or when constraints on the size of the code are part of the original project, that the task of translation will involve reworking processes and the code. One of us and Natalia Fedorova has described the necessity of changing processes and code with reference to several e-lit works.[2]

3. Under the Sea

John Cayley has explained that the code is not the text (unless it is the text), and in saying so he did not go overboard: "A specialised appreciation for code does not in any way preclude the mutual contamination of code and natural language in the texts that we read on screen, it simply acknowledges that—in their proper places, where they function—code and language require distinct strategies of reading."[3]

Codework can bring tropes of programming and writing together, but it does not mean that code doesn't work or that natural-language text executes. Similarly, attempts to make code human-legible through good programming practices, the use of literate or natural-language-like programming environments, or the writing of

extensive glosses in comments (discussed in section 5) do not extract code from its context as part of a computational machine, as text that requires an understanding of computation to be fully read.

While we consider a usual "reading" of *Sea and Spar Between* to involve manipulating the interface of the pale-blue browser window that presents the lattice of stanzas—and this is the type of reading we discuss on our explanatory page "How to Read *Sea and Spar Between*"—we also link from that page to the JavaScript file that implements the generator. As much as readers can use the keyboard and mouse in special ways we have devised, they can also, by means of "View Source" in their browser menu, find the "sea_spar.js" link on the HTML page, click on it, and reveal the code at the core of the project. This step was certainly taken by our Polish translators and by Mark Sample, who modded our poetry generator to mash up Walt Whitman and Mark Z. Danielewski in *House of Leaves of Grass.*[4]

4. Bookmark in a Bottle

The space of stanzas is vast, but it would be wrong to term it a "Latitudeless Place." Each stanza has a horizontal and vertical coordinate, and pressing the spacebar will "harpoon" the numbered central stanza, bringing its coordinates into the box at screen bottom. From there, these locators can be hand-copied and saved. A reader can revisit them again within the canvas—although getting there in this manual way may take significant effort—or can retype them in the navigation box and press return. Readers may also specify coordinates by adding them, after a question mark, to the URL, and by this means may bookmark the page. For certain purposes, such as scholarly citation or perhaps reverse-engineering and better understanding the system, this bookmarking facility can prove useful, and we certainly used it ourselves in developing the system.

Still, we do not consider that readers will often seek out particularly apt stanzas and wish to return to them. While returning to a favorite stanza is possible in our system, it may seem a curious quest, perhaps as fruitless as Ahab's. For some readers, the experience of *Sea and Spar Between* will occur rather in the texture, operation, and journey of reading the work as it presents itself, rather than in any particular destination. Finding the free experience of reading to be better than the saving of coordinates, they will soon be "Done with the Compass — / Done with the Chart!"

5. The Cyber-Literary Gloss

A new edition of *Sea and Spar Between*, published in *Digital Humanities Quarterly*, takes as its title a line generated by the program, *cut to fit the toolspun course.* This edition interpolates long, explanatory glosses between lines of actual, working "toolspun" code. Our remarks were cut to fit the toolspun course of the program.

Entrained glosses provide a novel way to find, read, and understand text in e-literature—a way to investigate how code is used to meet aesthetic goals, by computational means, in works that include human language and are parsed by humans. They explain, to non-programmers, what different parts of the code do and why it is written as it is. They assess what portion of code is allotted to text-generation, display, or other use, and they interpret literary intent. Three sample glosses suggest their variety:

```
// 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.
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•

```
// The typical way we organized phrase and word data, in these and
// other arrays, was by alphabetizing the elements. However, in the
// shortPhrase, we chose to place "fast-fish" and "loose-fish" (Melville's
// terms for a whale held fast to a boat or loose at sea)
// next to each other at the end. This choice entails that they will appear
// fairly close to each other in the generated output.
```

•

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// Mapping structures to intention, the reader is thus deposited "at sea,"
// located in a poem which surrounds or environs him or her, affording the
// view of a sailor, yet not in Pound's sense of a sailor's view of the
// shore -- here, now, in this poem the shore has disappeared.
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6. Mallarmé's *Coup de dés* Interpreted by Meillassoux
Crossed with Moulthrop's "Failure to Contain"

Conjure a sea-wreck, no shore in sight—a world of projection and mirage: dead reckoning has failed, the ship is lost. A Pilot, the erstwhile "Master," barely afloat, clings to a Siren, a spar, a figurehead broken from the prow, a bit of language, a pair of dice, a number, and is faced with re-mapping stars from scratch, re-understanding how to count.

No one evokes this cultural situation better than Stéphane Mallarmé whose obsession with calculation gives us the poem *Un Coup de dés* (*A Throw of Dice Will Never Abolish Chance*), recently re-interpreted as a procedure of encryption by the philosopher Quentin Meillassoux in a book-length study called *The Number and the Siren.* The final version of *Coup de dés*, left in manuscript in 1898, overlaps the 20th century to inform the 21st. Mallarmé launches a poem and procedure that so exceeds the conventions of his day (treating each double-page-spread as one reading-page, performing its chiastic structure in the abyssal gutter fold at mid-book, staging visual drama in exploded word constellations with a variety of font styles and sizes, purging punctuation) that he asked Valéry, to whom he handed the corrected proof, "Don't you find this a demented act?"[5]

Stuart Moulthrop's keynote lecture at the Library of Congress in April 2013, entitled "Failure to Contain," argues that electronic text exceeds any containment, being neither content, contained for consumption, nor a water-tight vessel able to contain an immersion experience. He calls *Sea and Spar Between* an outstanding example of this failure and goes on to argue that such failure maps and models salient aspects of 21st-century reading/writing experience. Briefly, *Sea and Spar Between* defines a population of stanzas comparable to the number of fish in the sea, around 225 trillion, each harpooned by two fixed coordinates. The lattice of stanzas is unvarying; the only random thing about the generator is where it locates you each time you launch it.

Moulthrop claims that a reader of *Sea and Spar Between,* subjected to a "notoriously twitchy"[6] interface (think, instability of a longboat tossed by great waves), facing 225 trillion stanzas, *cannot* find or read this text by any 19th- or 20th-century method, including textonic inspection of the JavaScript file or coordinated crowd-sourcing effort.

This dilemma is very like that of the Pilot/Master lost at sea in *Coup de dés*. The dilemma of the Pilot/Master/Writer and his disappearing quill/plume within Mallarmé's poem, the dilemma of Mallarmé himself and his long attempt to reground literary symbols in the numeric, and the dilemma of the reader/writer who attempts to read *Sea and Spar Between* will be solved similarly. According to Meillassoux and Moulthrop, *if* reading does occur it is only by virtue of a social community of anonymous readers—an extremely small one, unknown to the supposed authors. It is also the case that a wager must be placed, on the part of both the writers and readers, perhaps better called here transmitters and receivers.

Coup de dés purports to be associated with a unique number that it does not disclose. One could plausibly imagine this number related to a potential dice-throw, on account of the dice held in the Master's fist "clenched far beyond his useless head," and on the basis of Mallarmé's tale, *Igitur*, where the crisis of ungrounded meaning was posed as a question of *whether* dice were thrown. *Igitur* remained unfinished. The attempt to control the frame of meaning by remaining hesitant, by refusing to commit—as if you could, thereby, have it both ways—fails; it does not choose *both*, it chooses neither. Within the logic of yes/no contradiction, or in any on/off digital frame, one must achieve both of two defined locations, equally possible, but undecidable, and Mallarmé's ambition evolves toward wishing to *fix* infinity, or *to be* chance: to be at the same time all the possible options of a dice throw, to encompass that which he cannot, and does not wish to, pin down.

The text of *Coup de dés* consists solely of interpolations into two main clauses, the second of which reads: "nothing of the memorable crisis…will have taken place…but the place…except…perhaps…a constellation." This memorable *crisis*, according to both Meillassoux and Jacques Roubaud, refers to the emergence of free verse in a world of syllabic verse tightly controlled by fixed meter. In Mallarmé's time, free verse is condemned as hacked-up prose, traditional verse as political shill.

Mallarmé finds worth in both: the alexandrine to be reserved for solemn occasions, free verse to be used to perfect craft. He envisions a civic, ceremonial cult celebrated by readings from a sacred, capital-B *Book* made of mobile pages, without any named author, whose anonymous reader or priest would operate it by joining the loose leaves according to a complex combinatorial pattern on an obsessively calculated

schedule. What should emerge is a multitude of meanings that will vary with the combinations, a kind of Web 1.0 link-structure.

Mallarmé's position, dividing the genres, dividing the roles, or steering a path between them, is repeated in his relation to meaning-seeking. Faced with ultimate meaninglessness, "the project of writing…gripped by the acute consciousness of its absence of foundation,"[7] he does not espouse the 20th-century choice made by Blanchot, endorsing a literature of exhaustion, or by Sartre, advocating a literature of the absurd. Perhaps driven by long meditation on counting and gambling, he realizes that, in Meillassoux's words, "if chance equalizes all options, then to write of the exhaustion of writing, or even to abandon all writing, as Rimbaud would do, is no more or less valid than to affirm resolutely the rights of poetry in the era of nihilism. From this point on, it becomes vain to choose, and therefore vain to finish the tale."[8]

Mallarmé began to focus on the performative real. This phrase rings quite differently to us than it did to him. He considered the Christian Mass, which claims to produce real (though not full) presence, to be a method of meaning superior to *representation* and superior to theatrical *re-enactment*. An apparatus operated anonymously, claiming to make something real happen, not only exhibits a Eucharistic mode of "presence in absence," it also aligns with execution of code in 21st-century terms.

Mallarmé's wager has a precursor in Vigny's 1854 poem, "Message in a Bottle," in which a sinking Captain throws to the waves a bottle containing his solitary calculations, a map of the reef, a study of constellations. *Coup de dés*, by contrast, does not represent throwing; in fact, it fails to represent *anything* definite, shrouded in mists, ambiguities, and alternative possibilities. The poem itself, however, is thrown, "[f]or the coding of the Number *transforms* the nature of the *Coup de dés*, making of it not just a text but an *act*…. And this act …is a *wager.*"[9]

Central to Meillassoux's claim to have actually deciphered *Coup de dés*'s unique number is his simultaneous claim that he could only have done so by chance, and also his assertion of the existence of a few other candidate numbers, unstable possibilities that are close enough to confirm intention, but undecidable, and thus not capable of definite closure. As Meillassoux says, Mallarmé "basically knew no more

than we do about his poem, and even…did not wish to know more; and this because the Poem is in itself, in fact, a 'machine' for hypotheses—a machine that functions without him…,"[10] a description that also fits *Sea and Spar Between* in ways Moulthrop makes clear.

What kind of wager is it? It does not resemble playing the odds. Not only is there no contained environment that would permit calculation of odds, but nothing exceeds the determinate in either *Coup de dés* or *Sea and Spar Between*. What has shifted radically is the point of view of the reading—no more top-down, panoptic chart and glass (Google or otherwise), but entirely bottom-up, from the point of view of the drowned Master. In both cases, the reader is drafted as writer, or the writer is primarily a reader, or both are decipherers. In the case of Mallarmé's old man, he must seize or shape a constellation from darkness. Meillassoux reminds us of Mallarmé's claim that "[t]o cut out, with the gaze, a constellation from this senseless splendor is to carry out an act wholly analogous to the poetic [one]."[11]

In these poems, every word is counted, every syllable allocated as required by Mallarmé's encryption procedure and by any algorithmic code. It is the fictional drowned Master who has become randomized, displaced by the Siren, and it is the social author Mallarmé whose reception has become subject to a radically random fate, seeking an unprompted, unsignaled reader who must ascertain from within the text, and by addressing the materiality of the text, its actual signification; it is the reader of *Sea and Spar Between* who is deposited randomly in an ocean of stanzas each time she returns to the poem. It is you, reader, who are random.

Narrative fails if you can't know beginning or end, even if you do know extent. But resonance does not. The accepted or sought moment, brought forward as whole, the dying view of the Master and its relation to Mallarmé's compact in writing the poem can hold a resonance that is passed down to Meillassoux, but *need not have*. In the 21st century a single stanza from 225, *or from 225 trillion*, equally, may resonate, even with meme-like force. And this impression will vary depending on how you happen to, and/or choose to contextualize it within wider swaths or waves of reading. There can be no anticipation of an outcome, only registration of it.

Uncontaining poems, poems that in some way identify with contingency, an enormous spectrum of possibility pointed toward an intrinsically unknowable aspect—such poems allow for neither an all-powerful author nor an omniscient reader. They escape any mastery of composition or surety of decipherment. So that, in Meillassoux's words, "no longer *being*, but the *perhaps*, [becomes] the first task—the task to come—of thinkers and poets."[12]

7. Encountering Non-translatability:
A Characterizing Sieve for Natural Language

Oceanic or global extent challenges literature in many ways in the 21st century. We have referred to the simultaneous "virtual, and…notional"[13] character of the vast extent of stanzas generated by *Sea and Spar Between* and to the specific undocumented, encrypted character of *Coup de dés*, a print poem that aims at a performative method of meaning over and above a discursive one.

The enterprise of translation has to engage all these aspects within natural language, and in the case of digital literature it must also carry out numerous decisions about platform, software affordance, data structure, and processing path. Each of these decisions must be remade if we move, as Moulthrop suggests, "from canons to *kernels*,"[14] to a sharing or interoperation of cyberkinetic texts. But translators of print, in the newly re-investigated project of world comparative literature, face similar problems, well-illustrated in the 2013 issue of *PMLA* that discusses 14 translations of an African classic, Oyono's *Une Vie de boy.* Here a multi-scholar collective was assembled to confront this multiplicity. The most striking effect of crossing the translations has been to highlight the crucial, irreducible importance of local history, local language practice (various dialects, pidgins, and class-based usage), and local culture.

Just as, in Moulthrop's words, *Sea and Spar Between* "is…demonstrably a *reading* of Melville and Dickinson,"[15] so any translation is a reading of its source, one that compromises—intensifying or evading the fine-grained particularity of—the source. Any re-implementation or modified version of its code acts to foreground what *cannot* be carried over. As with the Polish *Sea and Spar Between,* any attempt to

re-create data structures soon manifests characteristic specificities of the so-called target language.

Mallarme's struggles around *count*, a feature wrongly felt to be global, a feature *Coup de dés* performs, are deeply rooted in the French language and its poetics. I will briefly discuss three of these engagements: the argument as to whether silent *e* should be sounded in metric verse, the arbitrary nature of compound-word formation in French, and a specific set of *double-entendres*.

Coup de dés is a response to the challenge free verse makes to the classic French syllabic alexandrine and sound effects attainable *only* within it, which free verse does not simply shift but abandons. Mallarmé engages the argument about sounding silent *e* in metric verse. It is not a matter of phonic modulation, nor sonorous tenor, but a matter of what should be *counted*, in the hearing, *as* a syllable—as we might ask, in English, should we hear O-ri-ent or O-rient. He asserts the necessity for sounding, on the page, yet onstage he leaves it to the actor's sense of euphony. The question is whether metricity, and we could ask this also of algorithmicity, deserves to be heard as such and where it *can* be heard as such.

What feature works for words the way silent *e* works with syllable count? Compound words can be fused, hyphenated, or separated in French, but there is no rule that governs these three options, even within the same family of meaning. Unhyphenated and unfused, a two-part compound can change from being a locution whose parts *cannot* be reversed, to being a group of two words whose order can be reversed without changing their meaning. *Faux sens* meaning mistranslation is compound; but *faux sens* as the opposite of *sens vrai* does not count as one word and in fact may be expressed *sens faux*. Thus context can modify not only meaning, but count. How do you count (as two, or as one) a compound word that is both unhyphenated and unfused? The answer bears on *Coup de dés*'s unique number. The kennings in *Sea and Spar Between* present a parallel problem for Polish translation.

The number Meillassoux finds for *Coup de dés* is 707, seven-hundred-seven. In French the word for without/zero (*sans*) and the word for one hundred (*cent*) are homophonic. How does this number relate to the syllable *si*, and what does 7 mean to Mallarmé? There are 7 rhymes in a sonnet; 7 stars in the *Septentrion*, as the

French call the Little Dipper, the constellation that contains the navigational North star that appears at the end of the poem; 7 is the most likely result for the throw of two dice; the poem contains a 7-word coda, or envoi, *Every Thought Emits a Throw of Dice*, which has the effect of closing a ring-structure, making the poem begin and end with the same phrase.

Apart from the name *Septentrion*, these *numeric* effects can be shared, but when we come to the syllable *si* sharing ceases. *Si*, which in English we call ti, is the 7th note of the scale, indicating a poem to be read more as score than narrative. The name of the Siren in French, who may be a mermaid-like creature or the broken-off figurehead from the prow, *Sireine,* decomposes to *Si-Reine*, *Si,* the Queen, or 7-crowned, or If-crowned. In French *si* means "if," but signals, as well, an affirmation after a negation. Capital *SI* stands for Sancte Ioannes, St. John the Baptist, whose beheading is repeated by the Master figure in the stages of his drowning. *Si* is the conjunction that rules the hypothetical, subjunctive rhetoric of this poem with its imitation of a mathematical style of supposition and exposition, "the symbol of axiomatic, rather than narrative, presentation…."[16]

For Mallarmé, poetry alone creates true song because it creates with words alone, producing "a profound unity between thought and music."[17] He attacks opera, especially Wagnerian opera, as mere juxtaposition of parallel and separate lines of libretto and score. Quite provocatively, he claims to retrieve music from strings, brass, and wood, and from declamatory reading. Poetry is, for him, "silence's musician";[18] it finds a conceptual ally in his encryption and in 21st-century code.

[1] We developed *Sea and Spar Between* by collaborating throughout the process, from the initial development of the idea through our presentations of the work. We jointly created the system's functioning, text, interface, and comments in the code. In a departure from this practice, however, we wrote sections of this paper separately: 1-4 written by Montfort; 5-7 by Strickland.

[2] Montfort, Nick and Natalia Fedorova, "Carrying across Language and Code," Technical Report, The Trope Tank, MIT, TROPE-12-04, 2012

[3] Cayley, John. "The Code is not the Text (unless it is the Text)," *ebr (Electronic Book Review)* 2002-09-10, http://www.electronicbookreview.com/thread/electropoetics/literal

[4] Sample, Mark. "no life no life no life no life: the 100,000,000,000,000 stanzas of House of Leaves of Grass." May 8, 2013. http://www.samplereality.com/2013/05/08/no-life-no-life-no-life-no-life-the-100000000000000-stanzas-of-house-of-leaves-of-grass/

[5] Meillassoux, Quentin, *The Number and the Siren:* A Decipherment of Mallarmé's *Coup de dés*, Sequence Press, New York, NY, 2012, p. 85

[6] Moulthrop, Stuart, "Failure to Contain: Electronic Literature and the State (Machine) of Reading," Keynote Lecture delivered April 5, 2013, Library of Congress, Washington, D.C., privately communicated manuscript, p. 5

[7] Meillassoux, Quentin, *The Number and the Siren:* A Decipherment of Mallarmé's *Coup de dés*, Sequence Press, New York, NY, 2012, p. 32

[8] Ibid., p. 32-33

[9] Ibid., p. 116

[10] Ibid., p. 147

[11] Ibid., p. 46

[12] Ibid., p. 222

[13] Moulthrop, Stuart, "Failure to Contain: Electronic Literature and the State (Machine) of Reading," Keynote Lecture delivered April 5, 2013, Library of Congress, Washington, D.C., privately communicated manuscript, p. 5

[14] Ibid., p. 11

[15] Ibid., p. 11

[16] Meillassoux, Quentin, *The Number and the Siren:* A Decipherment of Mallarmé's *Coup de dés*, Sequence Press, New York, NY, 2012, p. 62

[17] Ibid., p. 64

[18] Ibid., p. 64