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Opening a Worl in the World Wide Web: The Aesthetics and Poetics of Deletionism

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I. Introduction

Erasure is often discussed as hypertextual (perhaps first by N. Katherine Hayles in her analysis of Tom Phillips' seminal *Humument*) because it creates new networks of meaning within a matrix of language. [1] The artistic practice consists in removing text from a source in order to draw attention to one's own invented text, hidden within it, either allowing a palimpsestic double-reading, by leaving the source somewhat intact, or obliterating it entirely from view. [2] *The Deletionist* sets out to create erasures from the vastest hypertext available, the Web, considered by Kenneth Goldsmith to be, itself, "the greatest poem ever written." [3] When readers activate the JavaScript bookmarklet on a given site in that vast network, the dutiful Deletionist runs through a series of poetic rules and selects a single one to apply to that page – the one it deems most suitable. However, when we set out to create this project, we were not interested in crafting exquisite poetry via artificial intelligence, but rather in understanding the features that make erasure legible as poetry, as well as in engaging in a dialogue with a number of historic precursors to this form of conceptual writing.

Amaranth Borsuk, Jesper Juul, and Nick Montfort, *The Deletionist*.

While erasure was once a rare technique, often used tacitly by writers who expected readers to recognize their intertextual references or to hear in the text's language an appropriated voice [4], it has now become so common as to prompt scholar and poet Craig Dworkin to say "I hope I never see another." [5] Our answer, of course, is to automatically produce a tremendous number of erasure poems, corresponding to every page on the World Wide Web, in the interest of opening up a worl in this tangled network. The primary expression of the project is online at thedeletionist.com, a site launched to coincide with E-Poetry 2013 in London, but we maintain Tumblr and Twitter feeds to help document our own and user-discovered deletions. [6] At a moment when erasure has been subsumed into the mainstream, even as redacted documents have become part of our political landscape, *The Deletionist* makes light of text by adding or removing apertures in the illuminated screen.

II. Erasure Poetry, Formally and Materially

The material techniques artists have used to enact erasure vary widely, often speaking in some way to the poetics of the work. [7] These include, but are not limited to, erasing (Ann

Hamilton), whiting out (Mary Ruefle), painting over (Tom Phillips), cutting out (Jonathan Safran Foer), covering up (Travis MacDonald), stitchery (Jen Bervin), and even transcription (Jackson Mac Low, Srikanth Reddy). In developing *The Deletionist*, we examined this broad history, in part to survey the formal and material approaches by which we recognize a work as an erasure poem. We were interested in creating a work that would interrogate the relationship between removing and revealing, construction and destruction, which in erasure become inseparable.

The Deletionist's very name situates its procedure as redactive: removal reveals new texts. Given the array of potential material approaches listed above, we could have opted for any number of visual strategies, but because *The Deletionist* lives in the browser, we determined its method must be a digital one predicated on our contemporary sense of all text as potentially unstable. *The Deletionist*'s basic method is to metaphorically "delete" unwanted text by changing its color setting to "transparent." In the digital realm, however, this functions quite differently from using liquid paper on a time-yellowed page. It makes the pixels rendered "transparent" equivalent to all the surrounding pixels, thereby visually removing, rather than masking, the words. It maintains, however, the spatial layout of the text, which gives erasure works much of their recognizability and force: the spaced words score the page, giving a voice to the emergent text that sounds, to eye and ear, different from the extant one. Like the Wikipedia editor who argues for the deletion of articles in archived conversations, *The Deletionist* erases text digitally, but never without a trace.

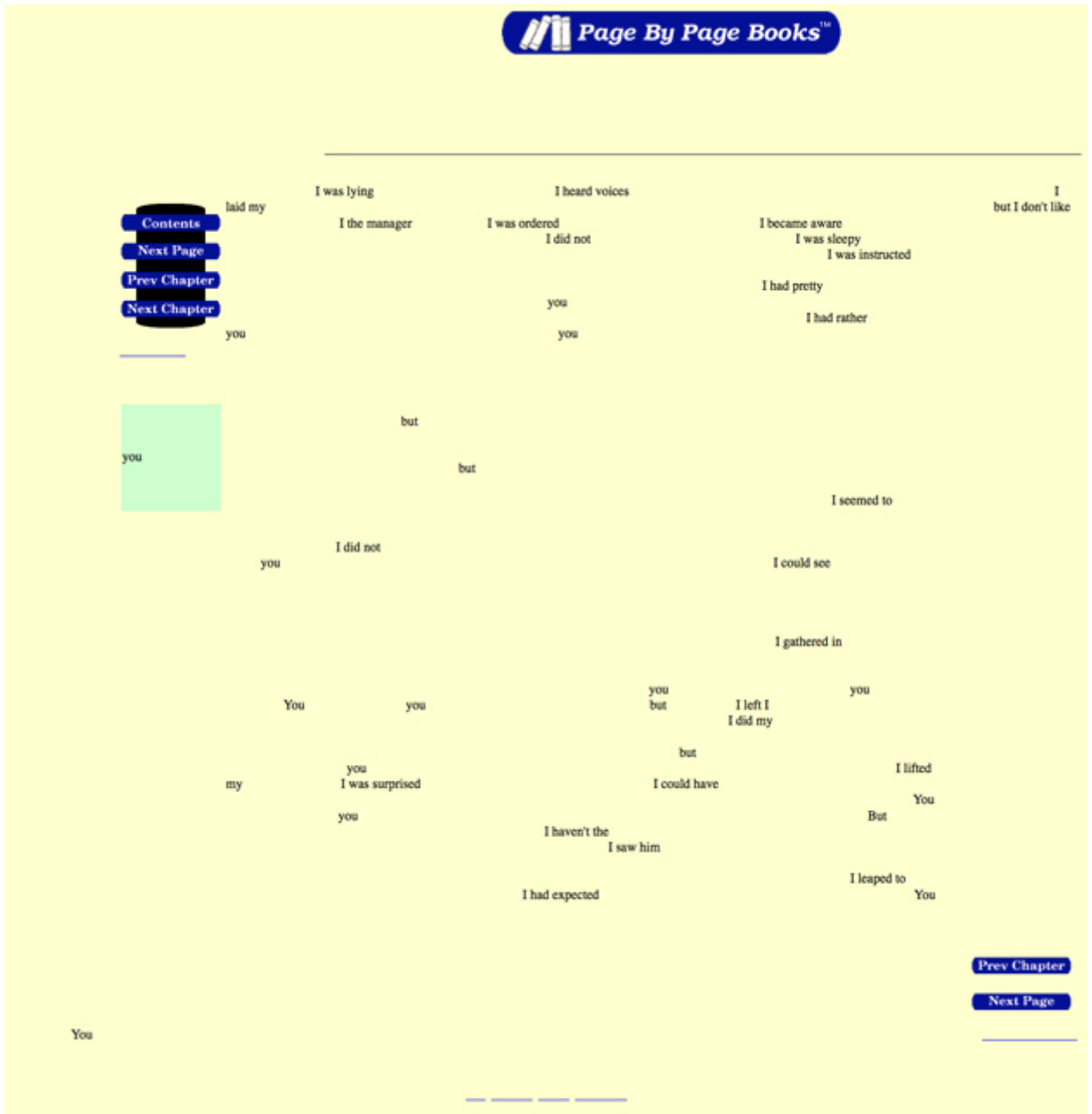
From *Paradise Lost*, "Book 1: The Argument," The John Milton Reading Room.

While visual artist Tom Philips and poet Ronald Johnson are often given as the progenitors of erasure for their seminal works created in the mid- 1960s and 1970s, our redactive poetic strategy might be tracked back as early as the work of avant-garde poet Bob Brown, who in 1931 published a small book titled *Gems* under his imprint, Roving Eye Press. Ostensibly an anthology of classic and edifying poems, *Gems* is full of censorious black marks that make sections of each piece (patterns of nouns, carefully-placed verbs, and end-rhymes) inaccessible to the reader, inviting our uncensored minds to do their worst – filling the gap with ribald language. Brown's treatment of Wordsworth's poem "Simon Lee, the Old XXX," provides an illustrative example:

> Full five-and-thirty years he XXX
> A running XXXX merry;
> And still the center of his XXX
> Is red as a ripe cherry.

The center of the running "huntsman['s]" flushed "cheek" turns prurient by virtue of this masking, and even the way he "lived" becomes suspect under the censor's thumb. Brown's satire of redaction's tendency to highlight what it attempts to hide was intended as both amusement and, as editor Craig Saper, who has recently reissued the book, suggests, "sociopoetic intervention." [8] The capacity of erasure to simultaneously enact silencing (as it does in Yedda Morrison's *Darkness*, which mutes of all references to humankind from the landscape of Conrad's *Heart of Darkness*) and give voice to a subsumed speaker (as in M. NourbeSe Philip's *Zong!*, which surfaces the voices of those drowned slaves thrown from the titular ship as well as those of their captors), suggests the palimpsestic, intertwined nature of any erasure and its source, though we often, these days, encounter only the text's remnants, reconstituted as poetry.

To these might be added Austin Kleon's *Newspaper Blackout*, which draws on the trope of black-marker redaction to create personal narratives from newspaper columns, rendering the source somewhat moot; and Jonathan Safran Foer's *Tree of Codes*, which offers a palpable visualization of the losses at the heart of Bruno Schulz's *Street of Crocodiles* by cutting windows into the pages, leaving threads of text suspended in superimposition.

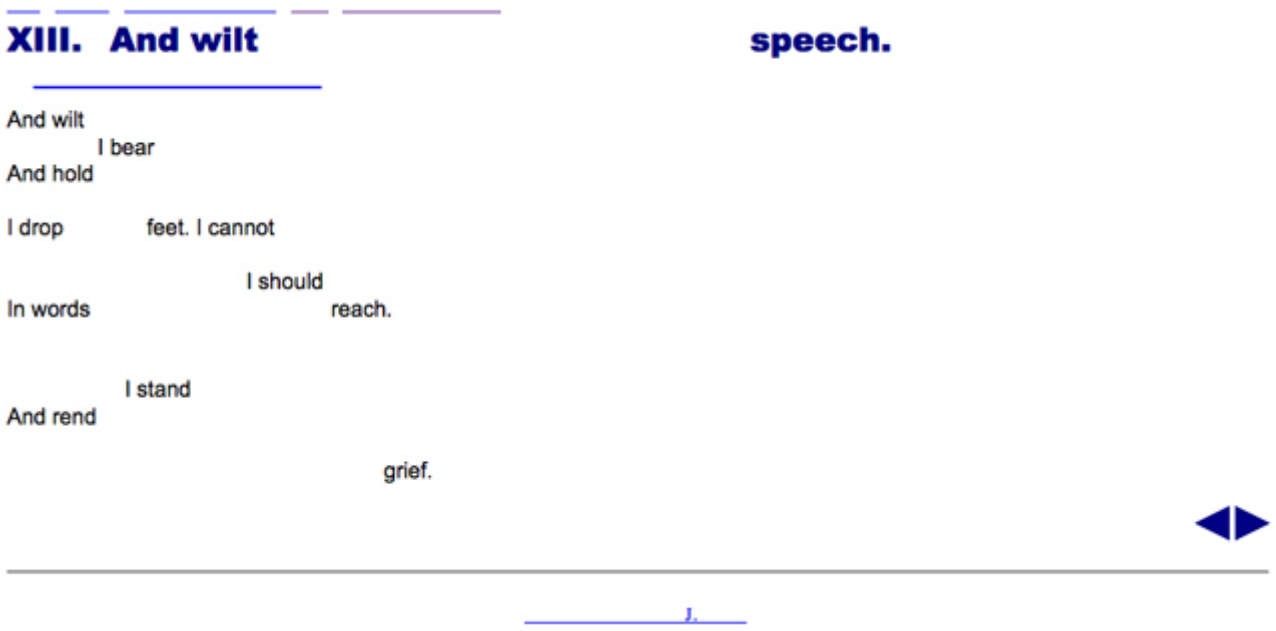


From *Heart of Darkness*, Chapter II, *Page by Page Books*.

A lineage of such obliterative work might also look back to other efforts of redaction that highlight precisely what they aim to conceal, among them Mabel Loomis Todd's excision from Emily Dickinson's letters of words and phrases that hint at her relationship with Susan Huntington Gilbert. [9] In addition to drawing our attention to what is missing, redaction points to the text's own structure, as in Marcel Broodthaer's 1969 printing of Stéphane Mallarmé's *Un Coup de dés jamais n'abolira le hasard*, which reduces the text to a series of black bars, evoking, perhaps, the wreckage of the ship described in Mallarmé's poem (and perhaps of the poem itself) set adrift on the silent white page. Likewise, Joseph Kosuth's 1986 redaction of Sigmund Freud, *Zero & Not*, draws attention to the ascenders and descenders that escape his attempts to suppress the letters via strikethrough; and Jenny Holzer's recent silkscreens of declassified government documents on communism and torture reveal just how much 'declassified' information remains hidden from view. These latter works, however, are not read as erasure precisely because the constructive impulse is missing: there is no attempt to shape the remaining text into something we recognize as a poem.

Erasure poets have relied on a number of formal techniques to reconstitute the page, and in building *The Deletionist*'s repertoire we surveyed these as well, seeking models and constructing a taxonomy of approaches. These range from stricter prosodic structures like anaphora (Tom Phillips), assonance, and alliteration (Janet Holmes), to poetic modes like apostrophe (Ronald Johnson) and internal rhyme that create an inner logic for the emergent poem and construct, thereby, a speaking subject. Some modes are purely visual, highlighting punctuation (Kenneth Goldsmith) and repetition (Bervin), drawing attention to the source as material: a matrix of textual data.

In order for *The Deletionist*'s work to be legible as poetry, we reasoned, it must do what every erasure poet does: write, as Bervin says, "with or against this palimpsest," not just of the source text, but of other erasure works. [10] Nearly every new erasure, or nearly, evinces a familiarity with its precursors, as when designer Andreas Töpfler translates Christian Hawkey and Uljana Wolf's white-out erasure of Rainer Maria Rilke's translation of Elizabeth Barrett Browning's *Sonnets from the Portuguese* into dashes and symbols that seem to allude to Dickinson's own visual repertoire, or when Yedda Morrison extends Johnson's recalibration of *Paradise Lost* (which, Erik Anderson has argued, displaces references to god and religion). [11] "The history of poetry," as Bervin writes, "is with us," and at this point the history of erasure, too, such that all erasure works must exhibit, to some extent, both self-reflexivity and intertextuality, hallmarks of the genre.



From Richard J. Yanco, "And wilt thou have me fashion into speech…," by Elizabeth Barrett Browning," Rick's Yanco's homepage.

III. Revealing the Worl

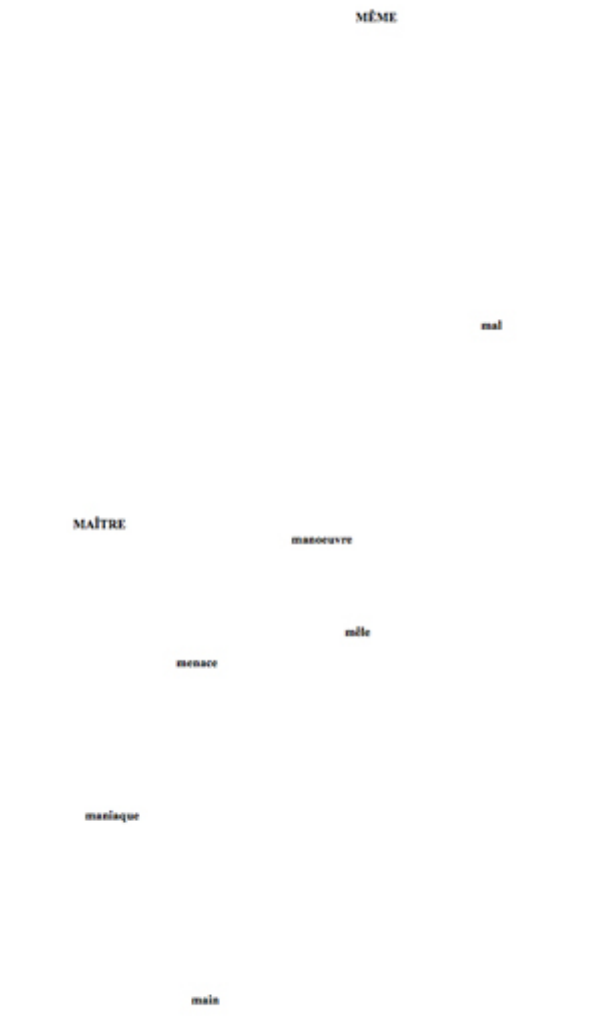
The Internet carries a palimpsest within itself as well. The view we have of the web in a standard browser (whether on a computer, tablet, or mobile phone) is central to our understanding of this network of documents, but it is only one glimpse of this system. We can use the "Page Source" or "View Source" options to see the HTML that is being retrieved when we click on a link that is used to generate the often more pleasing visual display of the browser. Servers also send HTTP header information when exchanging HTML, and these pages are sent by specific pieces of software (web servers such as Apache) running on particular operating systems that run on particular hardware. The conventional view of the web may be familiar, but it is only one view.

To highlight the status of this familiar view of the web as already being one of many, we chose to develop *The Deletionist* so that it would effectively reveal yet another network of texts. The code shows those who use it 'the Worl,' a knotty fingerprint within each web page of 'the World Wide Web,' and its rules seek to self-reflexively name that space whenever possible: it surfaces a 'worl' or 'Worl' within its poem when references to "the world" can be found in its source text.

It is possible to write programs that operate at random (or, to be precise, pseudorandomly) or ones that operate deterministically. A program that always prints "hello world" is deterministic, as is a program that converts Fahrenheit to Celsius temperatures: given any particular input, the same output will result. A program that simulates a coin flip or the roll of a die, of course, is not deterministic. It is not a problem to write programs of either sort. To create a visual effect one might wish to use randomness (as François Morellet did) or very austere regularity (as Donald Judd does).

The Deletionist is written as a deterministic system. When one runs it on the same page (not just a page at the same URL, but the same underlying HTML) several times, it always produces the same result. This means that instead of generating a different erasure each time (pseudorandomly), to highlight the vast range of possible emergent texts within a single source, the system offers just one: it reveals 'the Worl.' A reader who finds an interesting 'Worl page' by applying *The Deletionist* can share the URL with another reader who also is using the bookmarklet; that reader will see the same thing, unless the underlying content of the page changes. As a practical matter, it is not too difficult to take a screenshot and share it by social media, so that having *The Deletionist* is not necessary, but there is also the option to share URLs, allowing others the experience of discovery via deletion.

We thus use *The Deletionist* to present not just a toy for textual modification, but an alternate World Wide Web. By not throwing the die, we abolish certain types of chance but let others (the updating of pages, which is happening all the time) continue to affect 'the Worl.'



Insert Fig 5. – From A.S. Kline, *Mallarmé: Un coup de dés jamais n'abolira le hazard*.

IV. The Deletionist in Detail

The Deletionist is implemented as a bookmarklet, which means it can be moved to one's browser's bookmarks bar and, whenever one visits any page of the web, activated with only a click. It would also have been possible to host a site where visitors could submit URLs and have them processed on the server side; as is done, for instance, by Pornolizer. [12] However, this approach adds to one's server maintenance burden, since code is running on one's server, and it makes modification of the program by others difficult, since users would have to set up their own servers to run the modified program. Alternately, a browser extension could be developed so that pages are always erased as the user surfs the Worl. Such implementations range from recreational humor, as in the well-known extension that replaces mentions of "the cloud" with the phrase "my butt," [13] to artistic counter-surveillance, as in Benjamin Grosser's *ScareMail*, which appends ominous-sounding text to the end of Gmail messages designed to glut NSA surveillance with nonsense. [14] A more overtly literary browser extension, "Mark Ditto Mark" by A. J. Patrick Liszkiewicz and Lucas Miller, changes all first names on a page to "Mark" and all last names to "Ditto," making the entire Web seem to refer to a single person. [15]

The browser extension method requires a separate implementation for each browser, however, and while the "cloud-to-butt" substitution might be amusing to have happen always and automatically, it is necessary to see the Worl in contrast to the Web. *The Deletionist* as a system has a palimpsestic relationship to its sources, and much of the pleasure, humor, and interest in its results comes through juxtaposition. Unlike works of erasure that draw from high literary sources, *The Deletionist* must make do with whatever it is given, whether a *Buzzfeed* quiz, *New York Times* article, or HTML e-book. Knowing where the language has come from is central to appreciating what it becomes, particularly since the resultant poems are clearly formulaic in structure.

The Deletionist is also in dialogue with several precedent artistic bookmarklets, also known as 'artware,' that use creative code to open spaces of play and critique of our online experience. Many such bookmarklets target web boredom, transforming the textual space into a visual one, allowing users to play a Katamari-like game of rolling up language or an Asteroids-like game to obliterate the contents of any page, for example. [16, 17] Bookmarklets can also activate textual substitutions, in the vein of the well-known 'cloud' extension described above, as in James Bridle's substitution of the word "dragon" for appearances of the term "market" – a satire of current web jargon that literalizes a quote by technographer Justin Pickard. [18]

In our search for erasure-specific models, we admired graphic designer Ji Lee's *Wordless Web* (with coding by Cory Forsyth), which might be considered an extreme web erasure system, since it removes all text from a page except that occurring in images, allowing the user to appreciate pages as a viewer rather than a reader. [19] In a more overt critique, Daniel C. Howe's *AdNauseam*, popular in netart and hacker circles, inverts Lee's paradigm, blocking all ads as one browses the web. Its overt 'sociopoetic' gesture, as implied by its name, is to click on these ads repeatedly in the background, creating a completely uninformative virtual profile of the user while accruing significant costs for ad-buyers. [20] The *Redactive Poetry Project*, no longer maintained for use with current browsers, takes a different tack, giving users complete control over their erasure (similarly to Wave Books' website) by letting them draw censorious black marks through text on most pages. [21]

Cheekily called the RePoMan (REdactive POetry MANipulator), their project shares our desire to imbue our tool with an identity, if not agency.

From Thomas H. Kean et. al., "We Have Some Planes," The 9/11 Commission Report, National Commission on Terrorist Attacks Upon the United States.

The Deletionist is not an artificial intelligence, nor does it attempt to fool the reader into believing it is one. Rather, it is programmed in JavaScript to run a series of regular expressions (regexes) on a given text, and to judge the results via a fitness function that calculates 'interestingness.' Basing our erasure constraints on the literary and artistic precursors we studied, we developed thirty different formal methods for removing text, each of which is expressed in a regular expression, a pattern that tells the program which strings match. Our rules, each of which we named, are lexical – we specify which sequences of letters are to remain – and do not refer to any external database or other resource. For instance, one of the shortest rules is "Sound of Music":

```
/do|re|mi|fa|so|la|ti|(the\s+)?worl/ig
```

This solfège system creates musical language, and can also be read as a homage to artist Claude Closky's 'la la la' works, ballpoint redactions that play on the phoneme's dual function in French. [22] "Sound of Music" leaves only those elements of the text which happen to be part of the Solmization system and can represent notes, with one exception. The first part indicates that the rule will match "do or re or mi" – and so on – with the pipe symbol, |, indicating "or." The last part also keeps any occurrence of "worl," with or without "the" in front of it. The letters 'i' and 'g' at the end indicate the rule is to be applied without regard to case and 'globally,' rather than just once, as all the rules are. Because it is a regex, this rule can be used within a 'Find' or 'Find and Replace' dialog to search a word processing document or web page, for instance, and we tried our regular expressions in this way and others during development before placing them in the bookmarklet for testing and use.

From Oxquarry Books Ltd, "Sonnet 4," Shakespeare's Sonnets.

Many of our rules are closely based on the formal techniques prior erasure poets have used, and all can be seen in our freely accessible and fork-able Github repository or by 'view[ing] source' on the bookmarklet itself. [23] "Tears in Rain," for instance, erases all text except for punctuation, as Kenneth Goldsmith and Antonia Hirsch have done. [24] The "Poetic O" rule pays homage to the opening of Ronald Johnson's Radi Os, "O / tree / into the world," by selecting only the final "o" in words that end with that letter and keeping the next word to appear in the line. [25] "To be or not" finds forms of Hamlet's query scattered across the worl. Several alliterative rules leave words beginning with a certain letter, sometimes keeping a few other closed-class words to create new sorts of expressions. We included, as well, a generalized alliterative rule that works with many alphabets, so that even though *The Deletionist* is best-suited to the English and Latin alphabet, it has some mechanisms to reach beyond those. In another interlingual gesture, it has rules to locate short Spanish and German words within arbitrary Latin-alphabet text and to remove all other words, potentially converting English (or other languages) into Spanish or German.

VI. Détourning Deletionism

I call the erasure

I admit the necessity

From Jacques Derrida, "Of Grammatology by Jacques Derrida," *Marxists Internet Archive*.

The Deletionist was imagined as being remarkable in several ways. For one thing, it is a system that is general to the entire web. It can be run on any page. A page without text will not be changed, and the system works best on English-language pages, but it has some ability to generalize to other languages and alphabets, and its ability to work on English-language pages means it has a huge corpus to transform. The system also models writing processes. It computationally automates the activity of those human poets who have produced erasure poetry, or at least models aspects of this activity. *The Deletionist*'s methods attempt to abstractly represent some of those that people have used and to test them on arbitrary sources we encounter in daily life. Because *The Deletionist* works on the entire web, it can be run on one's everyday Web reading and on one's personal site or various online profiles, thereby deleting the deleter. Its ability to 'make strange' is enhanced because it can be turned (or détourned) to very familiar pages.

These ideas of generality, modeling process, and working on the familiar evolved with early work on the system and helped us focus our collaboration. Even if every page of the Worl may not shimmer with the power of the best human-authored erasure poetry, the system extends itself in these three directions and so offers users a radical new perspective on the world's major textual network.

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Bios

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Jesper Juul is an influential researcher in video game studies who aims to take games seriously as a cultural form, building the field to a level of depth and breadth comparable to that of literature or cinema. The author of three research monographs published on MIT Press, Juul also co-edits the *Playful Thinking* series. His latest book, *The Art of Failure*, asks why people play video games even though failing makes them visibly upset, a 'paradox of tragedy' that relates to tragedy in theatre. Before that, *A Casual Revolution* examines the recent shift of video games from a pastime for a narrow audience to being played by a majority of the population in many countries. Similarly, Juul's first book, *Half-Real*, responds to an early controversy within video game studies about the role of narrative in video games. Juul is currently an associate professor at the Royal Danish Academy of Fine Arts.
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Nick Montfort is a scholar of computational art and media who develops literary generators and other computational art and poetry. His most recent book, *#!* (Counterpath, 2014), contains programs and poems. His previous books of poetry and criticism include *10 PRINT CHR$(205.5+RND(1)); : GOTO 10*, (MIT Press, 2013), a 10-author single-voice publication on a one-line Commodore 64 BASIC program; *Riddle & Bind* (Spineless Books, 2010), literary riddles and constrained poems; *Twisty Little Passages: An Approach to Interactive Fiction* (MIT Press, 2003); and, with William Gillespie, 2002: *A Palindrome Story* (Spineless Books, 2002), the world's longest literary palindrome. Montfort is associate professor of digital media at the Massachusetts Institute of Technology and currently serves as faculty advisor for the Electronic Literature Organization. Montfort earned a PhD in computer and information science from the University of Pennsylvania, a master's degree in creative writing from Boston University, and a Masters in media arts and sciences from MIT.
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