124.

Adam Smyth describes Sir John Gibson's manuscript as "breathless, chaotic, fragmented," suggesting "little sense of coherence; even less of a linear order" (Smyth [Smyth, Adam. "'Rend and teare in peeces': Textual Fragmentation in Seventeenth-Century England." The Seventeenth Century 19.1 (april 2004): 36-52.] 38). Handwritten sententiae surround emblematic images; pre-Christian poems and devotional texts mingle; and cuttings are interleaved throughout the book (Smyth [Smyth, Adam. "'Rend and teare in peeces': Textual Fragmentation in Seventeenth-Century England." The Seventeenth Century 19.1 (april 2004): 36-52.] 37). Sometimes Gibson remixes the printed medium in simple ways, as when he appropriates a printed border to frame a verse (see Smyth [Smyth, Adam. "'Rend and teare in peeces': Textual Fragmentation in Seventeenth-Century England." The Seventeenth Century 19.1 (april 2004): 36-52.] 42); other times, the remediated layers of copied verse, printed images and commentary radically reinterpret the source materials, as in (Smyth argues) the collage of texts related to Charles I's execution (see Smyth [Smyth, Adam. "'Rend and teare in peeces': Textual Fragmentation in Seventeenth-Century England." The Seventeenth Century 19.1 (april 2004): 36-52.] 46). And, like Harsdörffer, Kuhlmann, and many other German figures during the same period, Gibson shows a deep interest in anagrams, punctuating his cut-up collages with wordplays and anagrammatic juxtapositions.

126.

It is true what you're thinking — that cut-ups take us rather far afield from *ars combinatoria* proper. Text generation through permutation as represented in Harsdörffer's Denckring is systematic and computational; cutting and pasting, while combinatory in a general sense, is more of an *ars compilationis*. In other words, whereas the former selectively breeds one organism at a time from an existing genome, the latter dissects organs from already-formed potentials, sewing them back together to form something wholly new.

That is: *ars combinatoria* is precise and conservative, operating within a closed network, whereas *ars compilationis* is open, incessant and unwieldy, as the scholar carves back the shoots and brambles that constantly threaten to engulf her work.

127.

Yet as writing practices, both *ars combinatoria* and cut-ups operate through selection, through picking out discrete elements — as in *legere*, to collect, gather, choose, pick out, read.

128.

Both *ars combinatoria* and what we might call *ars compilationis* — perhaps better situated in the growing histories on commonplacing, notetaking and marginalia (see, for example, Sherman [Sherman, William H. Used Books: Marking Readers in Renaissance England. Philadelphia, PA: University of Pennsylvania Press, 1008.]) — are literacies: strategies for consuming, producing and using texts in a language-rich media environment.

129.

A growing literature is exploring how we read and write across the dense network of twenty-first-century communications technologies (see Coiro et al. [Coiro, Julie and Michele Knobel, Colin Lankshear, and Donald J. Leu, eds. Handbook of Research on New Literacies. Lawrence Erlbaum Associates/Taylor & Francis Group, 2008.]). Perhaps not surprisingly, our "new" media literacies echo rather old strategies for manipulating information. Just as Sir John Gibson cut and copied passages, notes and references into notebook, we tumble and tweet the flood of net ephemera that washes over our screens, cutting and pasting found materials into webforms housed on servers we'll likely never see. In some ways, the structures we use, whether a printed commonplace book or a WordPress account, constrain how, when and where we compile our data; yet, like those before us, we tweak Blogger's CSS, write opensource plug-ins and create our own tags, our own folksonomies to suit our individual purposes.

12911.

Cutting, copying, pasting and combining are literacies: strategies for consuming, producing, and using texts in a language-rich media environment. It perhaps not surprising that we find deep similarities in the literacies demanded of readers at the turn of the seventeenth century and those at the turn of the twenty-first. Both eras were and are learning to organize and understand vast amounts of information.

130.

> All writing is in fact cut-ups. A collage of words read heard overheard. What else? Use of scissors renders the process explicit and subject to extension and variation. (Burroughs [Burroughs, William. "The Cut Up Method." The Moderns: An Anthology of New Writing in America. Ed. Leroi Jones. New York: Corinth Books, 1963. 345-8.] 347)

131.

> ALL WRITING IS IN FACT CUT-UPS OF GAMES AND ECONOMIC BEHAVIOR OVERHEARD? WHAT ELSE? (Burroughs [Burroughs, William. "The Cut Up Method." The Moderns: An Anthology of New Writing in America. Ed. Leroi Jones. New York: Corinth Books, 1963. 345-8.] 347)

13111.

Perhaps the most well-known cut-up artist of the twentieth-century is William S. Burroughs, who enacted Gysin's methodologies on his own oeuvre. Slicing and folding his way through the Word Hoard, a trunk stuffed with his typewritten work, Burroughs produced a set of three cut-up novels: *The Soft Machine* (1961), *The Ticket That Exploded* (1962) and *Nova Express* (1964).

13122.

Through the physical manipulation of the page, Burroughs' cut-ups argue that "the Word is literally a virus" inhabiting its "human host," serving "no internal function other than to replicate itself" (Burroughs [Burroughs, William S. The Adding Machine. Arcade Publishing, 1993.] 48). This is, Burroughs emphasizes, "not an allegorical comparison" (Burroughs [Burroughs, William S. The Adding Machine. Arcade Publishing, 1993.] 59): language physically inhabits the body, forcing us to experience the world

through an ongoing, neverending internal monologue (see Land [Land, Christopher. "Apomorphine Silence: Cutting-up Burroughs' Theory of Language and Control." Ephemera 5.3 (2005):450-470.] 453-456).

132.

> Quite simply, Burroughs' cut-up project of the 1960s began as a way to systematize the drive to lose the undesired past, to cut his way out of an old identity, if not out of identity itself. ... The ambition to make a complete break, to cut off history and dispossess the self, to kick the habit of what Walter Benjamin once called 'that most terrible drug — ourselves — which we take in solitude', this ambition demands discontinuity as a historical as well as a formal principle. ... The disjunctive and metamorphic juxtapositions that mark his cut-up texts of the 1960s undo the illusion of fixed identity, and this sabotage coincided, fully and quite deliberately, with the introduction of a radical discontinuity in the narrative of his own biographical and literary history. (Harris [Harris, Oliver. William Burroughs and the Secret of Fascination. Carbondale: Southern Illinois University Press, 2003.] 8-9)

133.

> Later Burroughs sought a self-abolishing structure, and tried to defeat our codes of continuity, cultural and temporal, by shuffling his prose into random order. "Writers until the cut-up method was made explicit," he says, "had no way to produce the accident of spontaneity." But it seems that in the logic of the situation we shall find such accidents happy only when we see in them some allusion, direct or ironical, to our inherited notions of linguistic and narrative structure ... If Burroughs is a satirist, and he is, then that also presupposes a past significantly altered. (Kermode [Kermode, Frank. The Sense of an Ending: Studies in the Theory of Fiction. New York: Oxford University Press, 1967.] 117-8)

134.

The story has been written so many times; why struggle for new words?

> At the surrealist rally in the 1920s, Tristan Tzara the man from nowhere proposed to create a poem on the spot by pulling words out of a hat. A riot ensued wrecked the theatre. André Breton expelled Tristan Tzara from the movement and grounded the cut up on the Freudian couch. (Burroughs [Burroughs, William. "The Cut Up Method." The Moderns: An Anthology of New Writing in America. Ed. Leroi Jones. New York: Corinth Books, 1963. 345-8.] 345)

135.

Here's how Gysin told the story in 1979:

> I always refrained from ever even reminding Tzara of this painful incidence in the Closerie des Lilas, where a traditional versifier named Saint-Pol-Roux was being feted as the Prince of Poets. The loosely amalgamated avant-garde of the time organized a commando night raid on the celebrated cafe and was routed by the riot squad. Breton

> loudly proclaimed that Tzara was a fink: he called the cops. When the lights went out, Breton heard the voice of Tzara calling the commissariat on the telephone, distinctly. The commandos chose to believe him. They went in together: they came out apart. Dada was dead. (Gysin in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 190)

136.

> Tristan Tzara and I used to bump into one another sometimes in the late '50s around about midnight, for a standup steak and a beer at the circular zinc counter of the old Royal Saint Germain, now transmogrified into the monstrous Le Drugstore, where no poets meet who can help it. Every time we met, Tzara would whine, "Would you be kind enough to tell me just why your young friends insist on going back over the ground we covered in 1920?" What could I say, except, "Perhaps they feel you did not cover it thoroughly enough." (Gysin in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 190)

137.

There is yet another beginning to this story.

> One day in late September 1959, Brion Gysin was in his hotel room, mounting some drawings, slicing through the boards with his Stanley knife and simultaneously slicing through the pile of old New York Herald Tribunes he was using to protect his table. When he finished, he noticed that where a strip of a page was cut away, the newsprint on the next page lined up and could be read across, combining stories from different pages, often with hilarious results. Some of the combinations amused him so much that his neighbors in the hotel knocked on his door, thinking that his laughter was a hysteria attack. (Miles [Miles, Barry. William Burroughs: el hombre invisible. New York: Hyperion, 1993.] 111)

138.

In the early 1970s, Tom Stoppard writes this action into the first scene of *Travesties*, a play starring James Joyce, Lenin, Henry Carr and Tristan Tzara. Together, they sit in a library "occupied with books, papers, pencils . . .":

> TZARA is writing as the play begins. On his table are a hat and a large pair of scissors. TZARA finishes writing, then takes up the scissors and cuts the paper, word by word, into his hat. When all the words are in the hat he shakes the hat and empties it on the table. He rapidly separates the bits of paper into random lines, turning a few over, etc., and then reads the result in a loud voice. (Stoppard [Stoppard, Tom. Travesties. New York: Grove Press, 1975.] 1-2)

139.

The hush of the library, with its categorized tomes tucked carefully on their shelves, shatters with the

sound of Tzara's voice, chanting gibberish from a loose pile of paper scraps. Tzara's act of cut-and-combine is more than a dissembling of the paper archive: it's a recombination, compiled from material scraps like Golem, like the Tower of Babel. Its very existence as such exposes the cut-up and combinatory nature of all around it, including what is presumed, in the wagging finger of the librarian, to be sacred.

No longer a natural or self-evident system, the archive is exposed for the randomness of its rules and its arbitrary organization. If the Biblical cut-ups of Jefferson or the Little Gidding community gave birth to a new, more perfect text, Tzara's hat trick is a form of linguistic death — an exquisite corpse.

140.

> Like Dali's, Tzara's hats are of felt, with their softly sloping crowns creased along their summits to produce the parallel lips of the fashionable fedora. A labial crease. A genital smile. (Krauss [Krauss, Rosalind. The Optical Unconscious. Cambridge, MA: MIT Press, 1993.] 162)

The women of Little Gidding splice together texts like DNA in the womb; Tzara reaches into a hat shaped like female genitals to extract lines of letters.

Can we gender the act of recombination? Do women, so often deprived of the pen, make their mark with the cut-ups of *ars combinatoria*?

And if so, what does Tzara's distinctly male act — described as the moment that gave birth to Dada — signal for a movement so distinctly homosocial and masculine (see Hopkins [Hopkins, David. Dada's Boys: Masculinity after Duchamp. New Haven, CT: Yale University Press, 2007.])?

141.

Like his friend Tzara before him, Brion Gysin — William Burroughs' colleague and, in Burroughs' words, "the only man that I've ever respected" (Burroughs in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 86) — experimented with cut-ups, slicing not only pages but magnetic tape and film.

Many of his poems operate through permutation, as in: "Come to Free the Words," "Too Free Come the Words," "The Words Come Too Free" (quoted in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 191); others juxtapose sound, text and image in a spontaneous, multimodal performance. He was, as he later described it, "attempting to show that these techniques could be decanted back and forth through different media" (Gysin in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 192).

142.

> There was a whole muggy area of doubt as to what to call this monstrosity I helped bring about. Because of the machines involved, the electronics, I would have called it "machine poetry," but everyone shied away from that. I felt good about creating through the machines, and they did not. I wanted to make language work in a new way, to surprise its

> secrets by using it as the material one passed through the available electronics to amplify the voices of poetry. ... I wanted to get as far away as possible from "inspiration." I wanted expiration instead, to breathe out rather than in. (Gysin quoted in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 194)

143.

In 1960, mathematician Ian Sommerville and Brion Gysin collaborated on automating the process of permuting the phrase "I AM THAT I AM." Using a computer, Gysin and Sommerville programmed a simple algorithm that would print out all 120 permutations of the phrase organized into four text blocks (see Funkhouser [Funkhouser, Chris. Prehistoric Digital Poetry: An Archaeology of Forms, 1959-1995. Tuscaloosa: University of Alabama Press, 2007.] 39, Kuri [Kuri, José Férez, ed. Brion Gysin: Tuning in to the Multimedia Age. London: Thames & Hudson, 2003.] 96-7).

144.

Florian Cramer links computer programming and the cut-up experiments of Gysin, Burroughs and Sommerville to mysticism and magic, all of which rely on the formal execution of linguistic commands. "Spoken by the author on the tape recording," Cramer writes, Gysin's permutations of 'IN THE BEGINNING WAS THE WORD' "were not solely mathematical computations, but also incantations" (Cramer [Cramer, Florian. Words Made Flesh: Code, Culture, Imagination. Piet Zwart Institute, 2005.] 17). Thus just as ritual provides a structure to order the seemingly random chaos of the world, programming ritualizes language itself, creating a controlled and yet infinitely expandable environment for contemplating our experience as linguistically embodied selves.

146.

Importantly and helpfully, Cramer's cultural history of computing embeds material technologies in an immaterial context, teasing out the subtle connections between software and the imagination. Yet the practice of cut-ups and *ars combinatoria* is more than the manipulation of symbols through matter; it is a complete materializing of language itself.

147.

By embodying itself as a running mental monologue, language — particularly after the advent of written text — frames existence as a linear narrative for Burroughs. Land explains:

> Burroughs is suggesting that the word-virus operates as an external 'other' that colonizes the body, forcing it to sub-vocalize and thereby reproducing itself. It is this internal monologue, all but impossible to shut off and expressly non-human, which produces an all-too-human sense of identity and self-continuity; generating a linear, narrative time along which experience is distributed and through which identity is assured. (Land [Land, Christopher. "Apomorphine Silence: Cutting-up Burroughs' Theory of Language and Control." Ephemera 5.3 (2005):450-470.] 455)

14711.

Which is to say: cut-ups cut-up control. Cut-ups slice through the flat sheet of a linear reality to give the page new dimensions, new depths. In doing so, cut-ups also free the poet — a necessarily linguistic being always/already inhabited by the word virus — from the parasite of narrative language, helping her to develop new linguistic sense perceptions.

14722.

Yet written language can never be wholly freed from its material state. Ironically, just as Burroughs disembodies the word virus, it attaches itself again to the page, clinging to the space where pools of ink sink into the fibers of the paper. In short, cut-ups can only extract obsessive bookishness from the human body by drawing attention to embodied state of any book, any text, which only exists through the page itself.

Thus being an active reader frees the writer to write; while merely"writing" — that is, manipulating the text as inscribed matter — allows the reader access to the text as a creation.

148.

Thus just as Harsdörffer mechanizes a materialist view of language in his Denckring, so Burroughs' theory of cut-ups treats language as always/already embodied, refusing to lock it in an immaterial mind.

From this angle, Burroughs' linguistic theory — like the history of *ars combinatoria* in general — might be read as a reaction against contemporary movements to scientize the study of language. As the cognitive revolution began locating linguistic meaning in syntactic relationships and mental processes, cut-up artists refused to dematerialize and disembody the word. For them, the relationship between human and text was not that of process and product, but a palimpsest of media forms that inscribed themselves onto and through the body.

14811.

> We began to find out a whole lot of things about the real nature of words and writing. What are words and what are they doing? The cut-up method treats words as the painter treats his paint, raw material with rules and reasons of its own . . . if you want to challenge and change fate . . . cut up words, make them a new world. (Gysin, quoted in Miles [Miles, Barry. William Burroughs: el hombre invisible. New York: Hyperion, 1993.] 130)

14822.

> My ambition was to destroy the assumed natural links of language, that in the end are but expressions of Power, the favourite weapon of control or even the essence of control. (Gysin, quoted in Kuri [Kuri, José Férez, ed. Brion Gysin: Tuning in to the Multimedia Age. London: Thames & Hudson, 2003.] 164)

14833.

> The permutated poems set the words spinning of on their own; echoing out as the words of a potent phrase are permutated into an expanding ripple of meanings which they did not seem to be capable of when they were struck and then stuck into that phrase. (Gysin in Kuri [Kuri, José Férez, ed. Brion Gysin: Tuning in to the Multimedia Age. London: Thames & Hudson, 2003.] 154)

149.

Of course, it would be disingenuous not to point out Burroughs' later boredom with the whole project. As he said of cut-ups in a 1983 interview with Nicholas Zurbrugg,

> Well, I haven't done any of those in years, but they were interesting. They explored the whole matter of synchronicity. You can record in the street, and you can take something that you've recorded and play it back in the street, and you observe all sorts of synchronicities. It just makes you aware of certain things going on all the time anyway. (Burroughs in Zurbrugg [Zurbrugg, Nicholas, ed. Art, Performance, Media: 31 Interviews. Twin Cities: University of Minnesota Press, 2004.] 70)

And thus the cutting edge becomes "interesting" — simply something to do.

150.

As Funkhouser points out, Gysin and Sommerville's experiment was not the first to use computers to automatically generate lines of verse. In 1959, Theo Lutz used a Zuse Z22 computer to "take over the laborious production of stochastic texts," substituting the effort of, for instance, throwing dice with a "program-controlled data processor" to generate random numbers (Lutz [Lutz, Theo. "Stochastische Texte." augenblick 4 (1959): 3-9.] online). Here's how it works:

> A new number is formed from an initial number by an arithmetic operation, and from this number digits are taken by intersection, which are then considered to be a random number. The number generated by this operation is the initial number to determine the next random number. By continuing this process, a sequence of numbers is obtained. (Lutz [Lutz, Theo. "Stochastische Texte." augenblick 4 (1959): 3-9.] online)

151.

> The machine stores a certain number of subjects, predicates, logical operators, logical constants and the word "IST" (engl.: "IS"), coded as binary numbers. Using the first random number the machine forms the address (i.e. the position number in the store) of a subject by adding a constant which the machine now has at its disposal. In the one-following memory cell, the program locates a code number which it evaluates as gender of the subject in question, e.g. 0= masculine, 1= feminine and 2 = neutral. The machine then determines a logical operator using a new random number and coordinates this with the gender of the subject, using the located code number. At this stage a print-out is done for the first time e.g. the teleprinter prints:

NICHT JEDER BLICK
(engl.: NOT EVERY LOOK) (Lutz [Lutz, Theo. "Stochastische Texte." augenblick 4 (1959): 3-9.] online)

152.

To computationally compose a poem, Lutz took Franz Kafka's *The Castle* as his source text, cutting the text into sixteen titles and subjects that were then stored in a database. Much like the roll of a dice, the numbers randomly generated by the program called the titles and subjects from the database, then organized them into a syntax according to predetermined logical constraints. The result is, as Funkhouser describes it, full of "discursive leaps and quirky, unusual semantic connections" that force the reader to "connect and interpret abstractions in the poem ... and derive meaning from the verbal associations while reading the text in and against its context" (Funkhouser [Funkhouser, Chris. Prehistoric Digital Poetry: An Archaeology of Forms, 1959-1995. Tuscaloosa: University of Alabama Press, 2007.] 37-8).

153.

> Lutz's selection of words, combined with his programming method, enables a speculative, self-reflexive, unconventional style of expression; the programming method consists of about fifty commands and could theoretically generate more than four million different sentences. (Funkhouser [Funkhouser, Chris. Prehistoric Digital Poetry: An Archaeology of Forms, 1959-1995. Tuscaloosa: University of Alabama Press, 2007.] 38)

154.

More recently, the cut-up method has been re-packaged as Flarf, a form of poetry composed by (among other things) plucking snatches of text from Google searches to combine into a poem.

Flarf is energetic. Flarf is shit. Flarf is naive. Flarf is dead.

And perhaps the only objectively true statement: Flarf is controversial.

155.

In an April 2006 edition of Jacket magazine, Dan Hoy chides Flarfists for not recognizing that "there is always a power determining orthodoxy in any 'random' generator" — particularly in a corporate entity like Google. Hoy also accuses Flarf of ignoring its Dadaist predecessors (Hoy [Hoy, Dan. "The Virtual Dependency of the Post-Avant and the Problematics of Flarf: What Happens when Poets Spend Too Much Time Fucking Around on the Internet." Jacket 29 (April 2006): online.] online).

156.

I'm not interested in debating the relative merits of Flarf. For our purposes, it's enough to recognize how Flarf has reinvigorated debate around the issue of randomness and chance in poetry — and reintroduced the question of code from a new angle. Thus far, most of the poems or volvelles or cut-ups I have discussed emerge directly from some form of code practice — whether a procedure such as

the exquisite corpse, a paper mechanism or a text-generating Perl poem. Yet, as Hoy argues, Google's obscure, closely-guarded search algorithms may influence the underlying ideology of a poetic practice without an artist even knowing how or why. What writer with a computer and access to the internet hasn't used a search engine to skim across the surface of the web's "bottomless ocean — all potentiality" (**Sokei-an**)? Whose "formless mind" has been left untouched by the new tools that surround us?

157.

Just as Tzaras's hat trick forces Stoppard to rethink the archive; just as Harsdörffer's Denckring opens a new relationship between poetry and the vernacular; just as Jefferson cuts up his Bible to reconstitute religion, so Flarf invites to consider how algorithmic media infiltrate the poetic mechanism. Maybe this is the ideological redemption Flarf's critics keep hoping to find behind its patent absurdism; but most likely not. Like other acts of *ars combinatoria*, Flarf's selective cut-and-recombine methods tell us more about the information age in which we live than it does about poetry. When overload impedes imagination, spin the wheel, search the web.

158.

In a comment appended to Thomas Basbøll's response, Anne Boyer writes that "Hoy misses the mark — the progenitor of Flarf isn't Cage, or Queneau, but Baroness von Else Freytag Loringhoven." Although written out of most histories of modernism, Freytag-Loringhoven was a well-known female avant-garde poet and subject of a recent feminist re-reading of Dada by Amelia Jones.

If Dada began with Tzara pulling cut-up words from a yonic hat, what does it mean that the most hated cut-up poetry movement of the twenty-first century identifies with the Baroness, rather than Cage or Queneau?

159.

> To use and/or promote a search engine without question is an implicit acceptance of it as an arbiter of relevance. This is like compiling a list of what's going on in the world from only the U.S. network TV news shows, without acknowledging the biases inherent in their selection processes. Google is not the zeitgeist, nor is it an indifferent and all-inclusive database of it. Google, as a generator, is a corporate algorithm that ranks webpage relevancy (from a limited cross-section — i.e. what it bothers to index — of an already limited segment of the zeitgeist — i.e. Internet users and web content) based on its own idiosyncratic definition of 'relevancy' and, in tandem with corporate web designers, manipulation of the results. (Hoy [Hoy, Dan. "The Virtual Dependency of the Post-Avant and the Problematics of Flarf: What Happens when Poets Spend Too Much Time Fucking Around on the Internet." Jacket 29 (April 2006): online.] online)

161.

> In the beginning was the word. Everything seems to be wrong with what was produced from those beginnings, so let's rub out the word and start afresh ... if the whole thing began with the word, well then, if we don't like what was produced, and we don't, let's get

> right to the root of the matter and radically alter it. (Gysin, quoted in Kuri [Kuri, José Férez, ed. Brion Gysin: Tuning in to the Multimedia Age. London: Thames & Hudson, 2003.] 130)

162.

To rub out: a verb phrase meaning both to erase, eradicate, remove the word. By permuting the phrase to the point of absurdity in his programmed permutation poem 'RUB OUT THE WORD', Gysin extracts the (as Burroughs puts it) "word virus" from the human, rendering meaning as nonsense, and written language as no more than set of arbitrary symbols.

Yet rub out also carries a sense of creation, construction — as in to "rub the text out of a slab of marble," removing the negative space around letters to bring a text to the surface. Thus to rub out the word is both to raze it and to raise it, wiping the surface clean even as one constructs a new reality.

163.

Thus Gysin permutes The Word to break outside an all-encompassing monotheistic system — indeed, to break outside of Meaning itself — but ends up reinstating another form of mystical creation: producing the infinite from the finite, or (to return to Leibniz's binary system) 1 from 0.

In this way, like Llull's machines of conversion, the material manipulation of symbols spins, and spins, and spins until language takes flight, no longer anchored to any totalizing linguistic system but becomes pure sound — a pure, pre-Babel utterance. Writing is not a process of making meaning, then, but of destroying meaning; and reading is precisely what we typically conceive of as writing — an attempt to find sense in the chards.

164.

Perhaps mystic Quirinus Kuhlmann and Brion Gysin share more than either might have imagined.

170.

As Lutz's work shows, even the earliest use of electronic digital computers treated writing as, to borrow a term from Kenneth Goldsmith, a fundamentally "uncreative" act of cutting up and recombining existing texts.. Indeed, the very act of programming — of building a model that (at least in much digital poetry) calls from and manipulates data stored in a database — engages writing as a form of algorithmic generation (see Kirschenbaum [Kirschenbaum, Matthew. "Hello Worlds." The Chronicle Review. January 23, 2009: online.]). Likewise, from their earliest conception digital poems questioned the traditional role of the reader. As Charles O. Hartman writes, as the reader becomes more important, poets begin to "think of moving him or her away from that end-of-the-road box in the diagrams and back into the process somewhere," thereby making "the reader's constructive role in the poem more conscious" (Hartman [Hartman, Charles O. Virtual Muse: Experiments in Computer Poetry. Hanover, N.H.: Weleyan University Press, 1996.] 105).

171.

> The phenomenology of reading that emerges from them shifts away from the sense of

> reading and writing as the only two directions of a highway into and out of the soul, and adds a very tangible third person plural. Constraints of keyboard, mouse, and screen are experienced as resistances from a machine intelligence governed by a social network whose horizon is out of sight, and these resistances are felt as both gateways and interfaces between body and machine. Text no longer projects as a bounded material object; it is more like a landscape of which only part is visible due to the limits of the gaze. Text unrolls down the screen in a manner not unlike the road or track unrolling before the gaze in a computer simulation of driving, and that is based on the framing of landscape by a windshield, so we might be tempted to wonder if the experience of reading has more affinity with driving than before. (Middleton [Middleton, Peter. Distant Reading: Performance, Readership, and Consumption in Contemporary Poetry. Tuscaloosa: University of Alabama Press, 2005.] 145-6)

172.

Funkhouser has identified a number of other early experiments in digital poetry: Auto-Beatnik, a computer programmed to spit out beatnik-y verse (1962); Jackson Mac Low's programmed film reader which randomly permuted messages (1969); Angel Carmona's "V2 Poems" and Alan Sondheim's TI59 calculator poems (both 1970s). As should be evident, many of the early works were generative and combinatory. Thus, just as Lull's arguments exist in the nexus between his combinatory Figures and their constants, the poetry in these experiments lies in the interaction between a designed program and a word list that, together, produce what appears to be a traditional poem.

173.

Here, it's worth pausing over one oft-cited early computer program: TRAVESTY, a text generator written in Pascal and developed in 1984 by literary critic Hugh Kenner and computer scientist Joseph O'Rourke. Designed as an algorithm for analyzing, manipulating, and (re)producing text, TRAVESTY takes a source text, divides it into character strings (or letters) of length n, then produces a statistical frequency table for any given set of n characters. This table is used to produce another text with the same statistical properties. Or, to use a noncomputational metaphor, TRAVESTY eats, digests and regurgitates any source text provided by its user.

174.

When $n = 1$, the output text is almost unreadable, each individual letter having been scrambled. However, when $n = 9$, the longest string possible in the program, the output text appears almost entirely the same as its input. Here's an example from Hartman before and after an $n = 9$ travesty:

> Dead flies cause the ointment of the apothecary to send forth a stinking savor: so doth a little folly him that is in reputation for wisdom and honour.
> Dead flies cause the ointment of the rule: folly is set in great dignity, and the end of his mout is foolishness: and the end of his talk is mischievous madness. (Hartman [Hartman, Charles O. Virtual Muse: Experiments in Computer Poetry. Hanover, N.H.: Weleyan University Press, 1996.] 55)

175.

> Travesty [an early text-generating computer program] offers ... the wickedness of exploding revered literary scripture into babble. We can reduce Dr. Johnson to inarticulate imbecility, make Shakespeare talk very thickly through his hat, or exhibit Francis Bacon laying waste his own edifice of logic amid the pratfalls of $n = 9$. Yet the other side of the coin is a kind of awe. Here is language creating itself out of nothing, out of mere statistical noise. (Hartman [Hartman, Charles O. Virtual Muse: Experiments in Computer Poetry. Hanover, N.H.: Weleyan University Press, 1996.] 57)

176.

By conceptualizing writing as a process of analysis and manipulation, TRAVESTY reduces meaning to a user-determined statistic, the numerical primitive long-sought by Leibniz. At the same time, the program's output continually slides along the rim between sense and nonsense, between language-as-meaning and language-as-data; in this way, much like the cut-ups of Tristan Tzara, TRAVESTY forces the always already literate reader to question the text's "authenticity." Thus TRAVESTY represents a return to an unfulfilled promise of the seventeenth-century programmatic epistemology even as it participates in the postmodern politics of twentieth-century procedural art, finding wholeness from plurality while exploding any sense of the "natural" in "natural language."

177.

At about $n = 3$, the early text-generating computer program TRAVESTY produces phrases like: "the thy hedge, afte se the whatter" — in other words, nonsense, but, as Hartman puts it, "clearly *English* nonsense" (Hartman [Hartman, Charles O. Virtual Muse: Experiments in Computer Poetry. Hanover, N.H.: Weleyan University Press, 1996.] 56). According any standard lexicon (including the *Oxford English Dictionary*), 'whatter' is not a word; yet it follows standard English rules for word formation — the 'h' follows the 'w', 'er' is a common ending — and so seems like it *could* be.

Thus, much like Leibniz's alphabet or Harsdörffer's Denckring, the TRAVESTY program treats written language as a set of rule-driven primitives and, in doing so, transforms a closed lexicon of isolated words into an open, infinitely-regenerative algorithm of linguistic possibilities.

178.

Hartman subsequently used TRAVESTY to compose poems. He began by writing several of his own verses, then feeding them to the program using 8 different n values (all but $n = 1$). These eight outputs he organized into a loose structure, then manipulated according to his own intuitive sense of the most "superior" output (see Hartman [Hartman, Charles O. Virtual Muse: Experiments in Computer Poetry. Hanover, N.H.: Weleyan University Press, 1996.] 62-4). The result is his "Monologues of Soul and Body."

179.

> Thinking up ways to 'do computer poetry' makes us look at language and poetry from an unfamiliar angle. This seems appropriate if one of poetry's functions is to make us aware,

> with a fresh intensity, of our relation to the language that constitutes so much of human life — or if you like, of how language constitutes so much of our relation to the world. How do words mean when we put them into new contexts? Under what conditions does the meaning web tear apart? What meanings can words make (or can we make of them) when we disturb their normal relation to each other? These are questions that any poet can be seen as asking; and from this point of view, someone experimenting with computer poetry is continuing an age-old project. (Hartman [Hartman, Charles O. Virtual Muse: Experiments in Computer Poetry. Hanover, N.H.: Weleyan University Press, 1996.] 104)

180.

As procedural works, early digital poems are often historicized — if they are historicized at all — against the modernist movements of the twentieth century, particularly dada, Fluxus, the Oulipo and cut-up methods. Thus for Glazier, the "post-typographic and nonlinear disunion" of digital poetry emerges from "Futurism, Gertrude Stein, and Dada," among others (Glazier [Glazier, Loss Peque ño. Digital Poetics: The Making of E-Poetries. Tuscaloosa, AL: University of Alabama Press, 2002.] 35); for McGann, Mallarmé's *Un coup de dés* comes to "forecas[t] key terms by which we now characterize digital media" (McGann [McGann, Jerome J. Radiant Textuality: Literature After the World Wide Web. New York: Palgrave, 2001.] 210); and electronic literatures are theorized against their "print precursors" (Sloane [Sloane, Sarah. Digital Fictions: Storytelling in a Material World. New York: Greenwood Publishing Group, 2000.] 44).

181.

Yet modeling digital poetry on modernist movements presents an interesting dilemma — what Sandy Baldwin calls the "paradox of innovation." For under this historical regime, "the 'new'-ness of literary innovation occurs against the background of a tradition that novelty ends up reinforcing" (Baldwin [Baldwin, Sandy. "A Poem is a Machine to Think With: Digital Poetry and the Paradox of Innovation." Review of Loss Pequeño Glazier, Digital Poetics: The Making of E-Poetries. Postmodern Culture 13:2 (January 2003). Online.] online). In other words, situating digital poetry within an always already avant-garde politics immediately renders it stale, uninteresting — merely an electronic iteration of procedural poems already produced on paper. In this model, the only thing "new" about digital poetry is the technology itself.

182.

On the flip side, digital poetry is sometimes imagined as a radical rupture from past practices precisely *because* of its technological newness. Thus Alan Sondheim writes that "for thousands of years, writers have, again in general, taking their tools — taken writing itself — for granted. Even Sterne and Carroll work within traditional means. The computer and the Internet, however, have opened up a whole (and indefinable) world of possibilities" (Sondheim [Sondheim, Alan. "Introduction: Codework." ABR 22.6 (September/October 2001).] 1).

183.

Yet by focusing on technological rather than aesthetic "newness," Sondheim goes on to describes these "vast uncharted domains ... of new and future literatures" (Sondheim [Sondheim, Alan.

"Introduction: Codework." ABR 22.6 (September/October 2001).] 2) — what he calls *codework* — in terms that could easily apply to Harsdörffer's Denckring or Caramuel's Maria Stella . Just as the paradox of innovation destroys the avant-garde, so does an obsession with newness reduce all literature to an outcome of its technological functionalities — in many cases, functionalities ironically found across multiple platforms.

184.

Importantly, my critique is not of these histories themselves, but of their deployment. Certainly dada deeply influenced many digital artists and programmars; likewise it would be facile to posit too deep of a connection between, say, Caramuel's Maria Stella and the TRAVESTY program. Rather, presenting digital poetry as radically new or even procedurally modernist overemphasizes media technologies at the expense of what Erkki Huhtamo, following Ernst Robert Curtius, calls *media topoi*, or "cyclically recurring elements and motives underlying and guiding the development of media culture" and, in particular, literacy (Huhtamo [Huhtamo, Erkki. "From kaleidoscomaniac to cybernerd: Notes toward an archaeology of the media." Electronic Culture: Technology and Visual Representation. Ed. by Timothy Druckrey. London: Aperture Foundation, 1996.] 301).

What if, instead of linking "digital poems" to modernist "procedural poems," we broadened our investigation to combinatory reading and writing practices across multiple material and aesthetic platforms?

185.

To understand Harsdörffer's Denckring in relation to an electronically-mediated work, we must take a radically anti-evolutionary approach to poetry. Literatures do not grow and then die; nor do they compete among each other in a race for the best environmental fit. The process of historicizing a set of practices demands that we explore their underlying epistemologies, both poetic and philosophical, as they have been embedded in very different media machines.

190.

> A mechanism is faulty not for being too artificial to account for living matter, but for not being mechanical enough, for not being adquately machined. Our mechanisms are in fact organized into parts that are not in themselves machines, while the organism is infinitely machined, a machine whose every part or piece is a machine, but only "transformed by different folds that it receives." (Deleuze [Deleuze, Gilles. The Fold: Leibniz and the Baroque. Tran. by Tom Conley. Minneapolis: University of Minnesota Press, 1993.] 8)

200.

As the final battles of what would become known as the Thirty Years War were being waged in central Europe, Gottfried Wilhelm Leibniz was born in Leipzig, a Saxony trading town in the northeast corner of the Holy Roman Empire. His father Friedrich, a professor of moral philosophy, died when Leibniz was only six, leaving a large library of books. At the urging of a neighbor, Leibniz's mother opened her husband's library to the curious young boy, who spent his formative years wandering through its diverse collections (see Antognazza [Antognazza, Maria Rose. Leibniz: An