PO.EX
ESSAYS FROM PORTUGAL ON CYBERLITERATURE & INTERMEDIA

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In this article I analyze digital re-readings of experimental poems contained in the digital archive Po-Ex: Poesia Experimental Portuguesa - Cadernos e Catálogos. This project, to be published online during the second semester of 2008, was developed by the Center for the Study of Informatic Text and Cyberliterature (CETIC) at Fernando Pessoa University (Porto, Portugal). I consider how experimental poetics is applied and transformed in the processes of electronic remediation of texts by E. M. de Melo e Castro, Herberto Helder, José-Alberto Marques, Salette Tavares, and António Aragão. While digital recreations redefine the source texts by means of specific programming codes, they also reveal the complex linguistic and graphical coding of the printed page.

1. The poem as writing and performance

Experimental poetry of the 1960's inflected the self-reflection characteristic of modernist aesthetics towards a critique of discursivity. This critique involved a double rationale: it was a critique of discoursivity in poetic discourse itself, i.e., of the discursive modes of poetic production; and it was a critique of discursivity as part of the social modes of production of the subject and of a certain order of political representations of the real. Experimental, in this particular historical context, meant performing a critique of language both by means of combinatorial syntax and semantics, and by means of visualization and sonorization of the poem. Graphic, diagrammatic, and ideogrammatic materiality of spatialized signifiers on the page, and pictorial and sculptural three-dimensionality were constituted as specific poetical resources, thus redefining the materiality and form of the poem.

Stressing the acoustic, aural, oral, and gestural materiality means recovering the poem as temporal and temporary event. As an instance of writing, its visuality is made to imply a voice and a body in the body of the poem. Whether sound

or visual, in these operations the text on the page reveals itself as mere notation or record of a poetic interpretation that has to re-enact itself again and again as a unique performance, which can only happen through specific and concrete acts of reading. And this is perhaps the particular contribution of experimental poetics: the combination of many of the modernist and postmodernist procedures (procedural writing, serialism, randomness, fragmentation of the signifier, critique of referential transparency, poetic self-referentiality, the poem as a sonic event, the poem as visual figuration, objectuality, intermediality, performative presence of reading in the poem itself) in order to investigate the conditions of meaning production in language, and of poetic meaning production in particular.

Figure 11—António Aragão’s “Poema encontrado” (“Found poem”) (1964) (in Caderno de Poesia Experimental 1: 40)
The concrete poem is another specific instance of the experimental aesthetics of the 1960s. A concrete poem can be defined as a self-referential poly-sign that, through fractal self-similarity between graphic form and semantic form, seeks to enclose its field of reference in its own materiality. From this point of view, the concrete poem is the linguistic equivalent of abstractionism and minimalism in its desire to refer to its own objectness—even if the external contexts of words and graphical forms often make signifiers return to the space of social interaction from where they were isolated. Augusto de Campos is certainly one of the extreme practitioners of this abstract conceptualization that aestheticizes signifiers by enclosing the sign in the sensoriality of its graphic and typographic form, as if sign and referent could somehow coincide.

But there are, of course, other processes no less procedural, such as those that arise through random collage or through so-called found-poems. For instance, visual poetry made with pre-existing materials (extracted from newspapers, magazines, and other kinds of printed materials) works on the basis of a tension between the original meaning of assembled materials and re-signification obtained by re-contextualizing. In this kind of texts, unlike what happens in classical concrete poems, in which the text appears as an allegedly self-sufficient microcosm, signs retain their contiguity with the contexts of communication and discourse from which they stem. And this is one of the ways through
which discourse is represented within the poem, that is, as a ready-made capable of re-appropriation and critical recycling. The “Poemas Encontrados” [“Found Poems”] (1964) by António Aragão are exemplary in the re-signification operated upon the language of newspaper headlines.

Two other formal and material features explain the apparent easiness with which many poems lend themselves to digital re-readings and recreations: their intermediality (or intersemioticity), especially their triple verbal, visual (both typographical and topographical), and sonic coding, which tends to associate voice and writing in grapho-phonetic forms; and their cinematicity, that is, the suggestion of graphemic motion. Spatiality and temporality are incorporated into the poem, thus sustaining a poetics of reading and language. By embodying this experimental poetics, texts show themselves as products of their own generative procedures, and of the particular perceptual and cognitive motions of reading. The text becomes the place of its own effects, which are structured in a series of intersemiotic echoes between the phonetic, the semantic, and the syntactic levels of verbal language, on the one hand, and of the representational and non-representational dimension of writing, on the other. Mimetic and expressive effects are displaced to the inside of language and of its codes and practices, calling into question the discursive modes of reference to self and world. A correlative of that type of metatextuality of writing is precisely the attempt to represent the materiality of reading in its neurological and mental motions. It is this awareness of reading and writing codes that gives digital properties to many experimental texts.

2. The uncertainty principle of hermeneutics

Digital re-readings of the experimental and concrete poetry of the 1960’s were, in some cases, initiated by the authors themselves, as happened with E. M. de Melo e Castro, in the series “signagens” (1986–89), and with Augusto de Campos, in several poems in the 1980’s and 1990’s, and in the series “clip-poemas” (1999–2000). In these digital versions of texts originally made for books and exhibitions, multiple reading paths are transformed into animation sequences, which temporize the appearance and movement of characters, actualizing a set of combinatorial possibilities in the original constellation or textual algorithm. The text foregrounds itself as a performance of its own writing and of its own reading: once the text is animated, it becomes clear to the reader how the movement
of the letters-as-writing replicates in its own specific algorithm the combinatorial rules of language, and how the movement of the letters-as-reading embodies the physical and cognitive motion of interpreting a verbivocovisual notation. The reader experiences the materiality of reading and the co-dependence between meaning and particular semiotic and hermeneutic operations, which denaturalize pragmatic uses of language. Experimental poetics explores the probabilistic and stochastic nature of language for meaning production.

In his reading of *Ideogramas* (1962), by E. M. de Melo e Castro, Américo Rodrigues interprets the page-layout of words as musical notation, combining the reading of horizontal lines with the reading vertical columns in various iterative and repetitive patterns. The syntagmatic axis of syntactical association and the paradigmatic axis of lexical replacement, as structural properties of verbal language, become combinatoric and probabilistic operators of poetic sequences. On top of that vocal permutation, which is but one actualization of many possibilities offered by graphical spatialization, Américo Rodrigues freely inserts variations in sound intensity and variations in pace. By changes in register, tone and pitch, he emphasizes different intentions and emotions. Such iterations and reiterations define patterns and recurrences constructed by reading upon the entire semiotic ensemble formed by written signs, and by their typography and topology. Co-dependence between writing and reading is unequivocally clear in this exercise: reading recodifies writing through its own protocols, and through its enactment in a unique performance of the text, revealing signification as a single event resulting from the act of reading as a material and concrete act.

It is as if the notational function of notation were defined only after the fact, when the vocal interpretation gives it a sonic and emotional value. When written text consists solely of black dotted lines and blank spaces, what Américo Rodrigues does is to find pre-linguistic vocal equivalents that may be said to read dots, traces, and blanks. The relationship between dash/trace length and white space length works as individual notation for relative duration of sound emission and pauses, which are interpreted in a fairly free and improvised manner. Sounds are grouped by the speech organ’s articulation affinities, with variations in increasing or decreasing respiratory rhythm and sound volume. The relationship of these changes with graphical variations is almost entirely arbitrary, since their vocalization has an internal order that re-signifies graphic marks, as if vocal sound preceded and originated graphical representation. Again, the convention-
ality and arbitrariness of the written sign depends upon an act of production and an intention that is produced through the act of reading as unrepeatable occurrence of a vocalization.

The voice rewrites the marks in the act of reading them. And this vocal exercise by Américo Rodrigues shows, in “Ideogram Nº 1” as in the other ideograms in the series, the co-dependence between reading and writing: both the sound, and the meaning, seem to operate in a feedback loop between the form of textual reading and the form of textual writing. The interpretation gives meaning to the notation, and the notation gives meaning to the interpretation in ways that are always asymmetrical and inexhaustible. Thus notationality becomes a function of interpretability, and vice versa: the vocal repertoire co-extends the written repertoire. This seems to be the peculiarity of dissemination as the mode of meaning production of writing: the presence of the absence of meaning, which must be made present at each new reading, can only occur through the temporal inscription of the interpreter’s voice in the eventuality of its own interpretation. The sound recording, in its performative singularity, is an occurrence of the phenomenological co-dependence between reading and writing. It is as if the algorithm that determines the structure of the elements in the text remained incomplete without the combinatorial intervention specific to the act of reading.

3. Language as a generative machine

In the 1964 “A Máquina de Emaranhar Paisagens” (“The Machine for Entangling Landscapes”), Herberto Helder rewrites the Genesis by permutations and recombinations of words, thus suggesting the co-extensibility between creating the text and creating the world in the text, and showing metaphoric attraction as a form of creation of the world as a language. Words, in their metaphoric recombinations, display the mechanism of language, i.e., its limitless capacity for meaning transfer. The generative productivity of the landscape of language enables it to evoke the whole metamorphosis of creation from a limited set of interchangeable elements. The transformational syntax that sustains lexical re-combinations is a correlative of morphological variations of organic matter in the world. To reveal the genetic code of the poem is also to reveal the poem as self-replicative machine, capable of expanding and transmuting in accordance with its own program of instructions. In the digital recreation of this poem, Pedro Barbosa makes explicit
the algorithm for entangling landscapes, by using his automatic text generator ‘syntext’ for recombining texts from the books of *Genesis* and *Revelation*, and from texts by François Villon, Dante, Camões and Herberto Helder.

This means that he has formalized the procedure used in the original text and programmed it more explicitly: once the syntactic structures of sentences have been defined and word-classes have been assigned their position code within those structures, permutations and combinations can be guided by an algorithm that selects in a randomized sequence the words from each of the subsets and then inserts them into a syntactical string. Metaphorical attractions reveal themselves as the result of the genetic process of textual creation, less dependent upon a subject’s intentionality as such than upon the iterability and productivity that is intrinsic to language, which, in a paradoxical way, materializes as the creator of the creation that creates itself. Thus, the self-replicative property of life can be recognized in the generative property of language. And it is precisely this mode of critical knowledge of language that developed out of the anti-expressive and anti-referential project of the experimental poem as verbal mechanism. Self and referent emerge as functions of language in its proliferative way of presenting and representing reality.

The double articulation of language explains its digital nature: it is the phonological machine-code that sustains, at the morphological, lexical, and syntactic levels, the system of differences that originates meaning. This revelation of the basic code of language in its written form is the compositional principle of “Homeóstatos” (1967), by José-Alberto Marques: graphemes contained in a single line, which may be either the first or last one in the text, and which repeat themselves in the same relative positions, appear as elements in other lexemes and morphemes, which in turn recombine at the syntactic and semantic levels. Self-replicative, self-referential, and recursive properties of the linguistic code are shown as similar to the possible permutations in electronic code. Much like the phoneme-grapheme, which generates an infinity of permutations, the machine-code sustains the semantic and syntactic level of programming languages. The generativity of both codes is evident in the digital version by Eugenio Tisseli, who uses Processing to make the letters disappear at each reading, which suggests homeostasis as a dynamic balance between signal presence and signal absence. José-Alberto Marques, as Edwin Morgan was doing at the time in similar poems, seems to demonstrate the double articulation of language as the way in which natural language is already digital.
In the digital version of José-Alberto Marques’ 1966 poem “Dois fragmentos de uma experiência” (“Two fragments of an experience” 1966), recreated by Rodrigo Melo, the programming consists of highlighting the continuity of lines, in which letters are just a string without word-spaces. The possibility of reading—which depends upon spaces that mark beginnings and endings of words, and reconstitute syntactic hierarchies in sentences—seems to have become even more remote in this digital translation. Strings of letters run in opposite directions and at different speeds, making it impossible to understand more than a few fragments of meaning. The fragmentariness of the original experience, whose non-representability was emulated both in the continuity of unspaced text and in the difficulty of deciphering caused by the lack of spaces between words, is now translated into the undecipherability caused by the motion of letters. The anxiety of experience as fragmentary representation is experienced in the motion of the text and in the movement of reading a text in motion. The reader is not only at a loss in isolating words and in remaking phrases and sentences, but he/she cannot help but to experience the incessant motion of the very language with which he/she tries to make sense.

The recreation of “Mapa dodeserto” (“Desert map”; 1966), by E. M. de Melo e Castro, in a version by Rui Torres, and Actionscript code by Jared Tarbel, also suggests the permutational processes of linguistic structures. Each set of letters permutates with all the other letters of the alphabet until lexicalized forms appear, i.e., forms that are recognized as words in the dictionary. Thus represented, the combinatoric potential of alphabetical writing (as graphic translation of phonological permutations) makes it possible to understand the genetic code of language and the possibilities for replication and mutation capable of generating new words. The permutations are timed and pre-defined, but they also allow for an interaction with the mouse cursor: by clicking on a letter a new sequence of letter permutations is triggered. Permutations only stop when letters vanish or when a lexicalized string is formed, suggesting that the word, i.e., the pair signifier-signified, is a temporary stabilization of the permutational flux inherent in the language code. Replication and transformation are the two main consequences of such generative property, with sequences appearing and disappearing consecutively. This is mapping the genome of language with the probe of writing, in what may be described as a digital extension of one of the principles of experimental poetry: the co-extensibility between world and poem, which produces the
real as the real of the poem in the poem, i.e., of the linguistic and graphic forms that realize its mode of existence and signification.

In “Edifício” (“Building”; 1962), by E. M. de Melo e Castro, the digital re-reading by Rui Torres and Jared Tarbel represents the potentiality of form through the potentiality of a structure under construction. Its ideogrammatic structure, which evokes reinforced concrete (in the original paper version), is transformed into a dance of materials in search of form: to the iconic similarity between graphic structure and referent, typical of the ideogram, the digital version adds an image of the structural potential of structure as a combination of materials and materialities. Cement and iron, paper and printing, electronic screen and animation. Kinetic translation of a static layout turns the movement of reading contained in the original text into an actual motion of signs. It also introduces coalescence between the materiality of materials, which offers a sensory perception of the fluidity and arbitrariness of structure as hypothetical construction. Such flow is also the fluidity made possible by multiple re-inscription on the same space, a feature of the electronic writing space. The building of writing is emulated by the potential of drawing for the invention and manipulation of forms. As in other animations of experimental poems, decisions for animating certain textual objects seek to make more visually explicit the process of writing as a live act of thought and as prosthesis for the imagination.

4. A random and automatic galaxy of signifiers

The digital dimension of language and alphabetical writing as generative devices is also foregrounded in the two digital recreations of António Aragão’s “Poemas encontrados” “Found poems” (1964), authored by Rui Torres, Jared Tarbel and Nuno Ferreira. As re-readings they are, at the same time, analyses of the procedure for composition implicit in the original, and an occurrence of reading as algorithmic procedure of recombining signs. The original “Poemas encontrados” (1964), while they contain a reading, are also a rewriting of a first writing, which exposes the social nature of language in this poetic appropriation of the graphics and semantics of fragments of phrases or words found in the press. The text by António Aragão consisted of a collage of headlines from newspapers, which point to the infosphere as social and political space of collective representation. The random collage of those headlines seems to refer to the alienating effect that
seems to make readers and writing strangers to each other at the very moment of their encounter. To (re)find those pieces of text as a poem is to be confronted with the proliferative materiality of language as it manifests itself in the written press. It is to see again its signifying materiality outside the reading protocols of newspapers and of their mode of production of a daily agenda. By doing this, these “found poems” also expose the unspeakable in the public space of the 1960s Portuguese press: the lack of political freedom.

The two digital recreations adopt different strategies, both of which stress the timed and temporal condition of writing in the periodical press. The randomized combination of printed headlines on the pages of periodicals is performed, in one case, by means of animation, in Actionscript code by Jared Tarbel, on a set of pre-defined words and phrases. Typographical differences in face, size, and style, as well as the progressive overlapping of white letters on black background, across different areas of the screen, emulate the indiscriminate collage of titles in the original. Instead of digitally recreating the original forms and phrases, what is recreated is the compositional and procedural principle of aleatoric combination of a pre-defined set of words and sentences. In the second instance, the Actionscript code by Jared Tarbel works in conjunction with PHP programming by Nuno Ferreira, and with RSS feed in real time from online editions of several newspapers and sites—Público (Portugal), Jornal Folha de São Paulo (Brazil), Google News Brazil, New York Times (U.S.A.), Jornal Folha de São Paulo (Brazil)—v. 2, Jornal Expresso (Portugal) and Jornal La Vanguardia (Spain). The combinatorial collage of newspapers’ headlines has been applied to the current online press, using the RSS tools and the language of web pages to build a mechanism for real-time digital collage—a device that is able to produce “found poems” through this particular sort of algorithmic procedure. By displacing the particular historical content and historical reference of the original collage, this digital recoding de-contextualizes and breaks the chains of meaning that bind text and context, a move comparable to the one occurring in the original. Indeed, this is one of the main effects of the collage by António Aragão: original sentences and references have been abolished, or they remain only as a distant echo, since the poem has broken the markers of discursive cohesion and coherence that ensured their pragmatic function in the context of origin. Its signifying emptiness, that is, its potential for meaning is embodied in the arbitrary network of relationships between words and sentence fragments, which continuously overlap and repeat
in different scales and at various points of the screen, resembling statistical clouds of occurrences.

Once the program has run, the final layout resembles the graphical space of the “Poemas encontrados” (1964) by António Aragão. In the meantime, the reader has been able to observe the formation of constellations of news fragments in an automatic process that delights in the randomness and automatic nature of the final result, an entirely contingent and temporary effect of an iteration of the program’s code at a particular moment, and from a particular corpus of textual sources. Even more so than in the text by António Aragão, meaning appears as an accident of reading and of its processes for filling in spaces and ellipses, and establishing links that are at once unique and patterned. Such links, however, have lost the hierarchy characteristic of newspaper or poem, i.e., they’ve lost the whole function of producing discursive cohesion and coherence. They emerge rather as live wires of semantics and as chaotic appearances of the proliferation of writing in a world saturated with letters. The black background represents the negative space from which an almost illegible galaxy of signifiers emerges—a galaxy that algorithmically re-constellates the original analog collage, and makes the generative process the very meaning of the text.

This is, incidentally, a materialization of the distributed and web-like nature of digital materiality: the fragments that make up the text, like the addresses of files in computer circuits, have to be transferred and reassembled from multiple servers in accordance with the hardware and software properties of the machine that presents them. The automatic feeding of headlines from news sites—which, in turn, is over-determined by the code that generates the graphic layout of the transferred textual fragments—also refers to the materiality of distributed electronic reproduction as a machine for “finding” poems. The semi-determined nature of the graphic and linguistic output, which can be printed, means that this second digital version of the original poem is ergodic and interactive, i.e, a work whose final instantiation depends on an intervention by the reader, which is unique and temporary. Like other digital works, the introduction of temporality into the writing occurs at two levels simultaneously: as a pre-defined timing in the source code and as the temporality of acts of reading that respond to newly generated text. Time of writing and time of reading gain material expression in textual animation/generation and in the interaction with the animation/generation mediated by the mouse cursor.
This textual engine gives the reader the possibility of seeing the combinatorics of text generation, and understanding how this process is a function of the automated tools of electronic writing. And this is perhaps the fundamental difference between the original text by António Aragão and its digital recreations. In the first case, the random combination of words and phrases found in the press still hosts the mark of the historicity of the particular act of the subject that “found” them. In the second case, the association is generated by a randomized programmed procedure, whose historicity seems alien to the human subject who activates its generation, as if the text were constructed independently of his/her participation. And this is, in effect, one aspect that resists conceptualization in the phenomenology of electronic hypermediation: the semi-automatic nature of text generation, although subject to decisions that affect its enfolding, appears to offer the text as a kinetic spectacle, disconnected from its interpretive remediation by a reader. Considered as a reflection on the nature of writing and reading, the experimental poem located the dissemination of meaning in the relationship between semiotic intervention and hermeneutic intervention, drawing our attention to visuality and topographicality as textual markers, and therefore as particular sets of reading instructions. In this respect, digital recreations seem to depart from a poetics of reading, typical both of ideogrammatical texts, and of collage- and assemblage-based texts, because automation sometimes diminishes the self-consciousness of reading.

5. Kinetic rewriting of the visual poem

The use of kinetic properties of electronic writing for rereading and rewriting experimental poems makes visible the operations performed by programming code upon the graphical code that configures language in visual and concrete poems. In electronic remediation of the printed page, the digital recreation of typo- and topographic markers usually consists of projecting a sequence of movements onto the constellated poem. These motions frame the printed text constellation as either final, or initial, or even intermediate frame within a sequence of other related frames. The original layout enfolds as a storyboard for animation, that actualizes through specific sequences the multiple reading paths featured in the spatialized field of signifiers, which the eye follows from point to point, exploring various motions suggested by the radial distribution of letters and
words. The hermeneutic potential of the original text, that is, the interpretive possibilities arising from the proliferation of paths for reading a topological space, is converted, by means of animation, into a new semiotic set.

This conversion of hermeneutic space into semiotic marks presupposes the conversion of an act of reading (for example, eye movements that connect letters or words along certain paths) into an act of writing (the explicit presentation of that perceptual and mental linking as a property of the kinetic sequence). This rewriting, in turn, is poised upon an intersemiotic translation, which involves, among other things, implementing operations characteristic of film codes (definition point-of-view, shots, cuts, angles, zooms, travelling, etc.) that stand for (and transform) the original graphical code. This re-visualization of the visual text also implies a geometrical shift from the paper plane to the screen space. The bi-dimensionality of printed writing makes way for the tri-dimensionality of electronic writing: to the x and y axes of the paper sheet, we have to add the z axis of the third dimension of electronic space. In this process of transcoding the experimental poem, it is the electronic space itself that opens up as a laboratory for forms released from paper. Certain self-referential and self-similarity operations can now be worked with reference to the new electronic environment.


In “Transparência/ Oblivion” (1964), the procedure is to build a kinetic narrative, of which the original visual text becomes a kind of compressed version. The letters first appear and distribute themselves according to the spatial axes of the paper version, but they soon extend beyond that grid as they accumulate and become denser all over the screen in order to suggest a rapid explosive expansion and the shrapnel scattering after the blast. The phrase “a pax evita a explosão” (“pax avoids explosion”), which was set along axes parallel to the scattered letters, has now become the culmination of the sequence, offering in a much more explicit way its pacifist message as textual closure. Narrative sequencing of elements that were simultaneously present on the plane of the printed paper page is, in some of
digital recreations of printed visual poems, a factor that reduces the diagrammatic complexity of the original.

This reduction of combinatorial possibilities works, to some extent, as a hermeneutic action that performs a particular interpretation on a complex set of verbal and visual signs. Perhaps this explains why these recreations also present themselves as re-readings: in many cases, they are actually exercises of electronic interpretation applied to written/printed texts. In other words, what we see on the screen is not only the potential of electronic tools as a new way of writing, but also what these tools reveal about the ways in which the visuality of written language and of bibliographic codes produce meaning.

In the recreation of “Hipopótamos” (1964), the exercise of separating letters, needed to read the original text, is mediated by the mouse cursor - which allows the reader to speed up or slow down the circles of text, and to move them back or forward. This is a frequent digital trope in the rewriting of printed visual poems: the physical movement of reading is transferred to the movement of the text itself, and the cursor is made to perform part of the work of the eye by acting upon sets of signs in order to make them legible. The motion of writing and the motion of reading emerge as co-related and co-dependent movements.

In both poems by Salette Tavares, the layout of word lists is set in columns: in “Poemas em efe,” they have to be read in several directions, and they come in various typefaces, sizes and styles; in “Algarismos Alfinete” there are two directions for reading, and a single typeface and type size. In the digital version of “Poemas em efe” (1964), the movement of words starting with f has been set along a diagonal axis, with relative variations in speed causing multiple and overlapping patterns and several patterns of movement, which suggest the phonic, semantic, and graphic attractions of the original combinations. The typographic contiguity between groups of words that are distributed along horizontal and vertical axes, which form subsets in the original text, is turned into web-like and radial contiguity. Their animated motion enhances the relations of contiguity between any one element and the other elements in the set. Any act of reading this digital text reflects its random recombination of words, by forcing the reader to fix his eyes at random on a particular element. Although it lacks some of the play with the graphic materiality of the letter f in the graphic layout of the original, this recreation brings digital materiality to the fore: the
kinetism of words on the screen is the inter-semiotic equivalent of the topographicality of the static printed arrangement.

In the digital version of “Algarismos Alfinete” (1964), the original words have been radially reconstellated in a way that suggests three dimensions, emphasized by differences in size and tonal shade of characters, with words superimposing each other in four or five successive plans. The words are pre-programmed to increase in size and to move continuously towards the forefront of the picture until the extreme close-up falls outside its framework. Besides this kinetic and cinematographic effect, the reader has the possibility of clicking on one of the words, which automatically causes it to move to the central area of the screen, dragging with it the remaining word constellation. Both effects (radial distribution and reconfiguration of the three-dimensional position on the set when one element is brought to the center) perceptually convey in a more powerful way one of the effects of the original: the perception of the coexistence of words in a network of phonetical and lexical affinities, often indicated by their common origin. If in reading print the eyes are moving between each of the words, and momentarily demoting or erasing the others, in reading the digital version the co-presence of the network of constellated words remains, when the eye moves to the word that functions temporarily as the central focus for reading. The movement of the text towards the screen activates peripheral vision and does not allow the eye to isolate the word where it is momentarily fixed from the others surrounding it.

This means that the original effect of decentering, which presented words as a kind of musical-lexicon score, is emphasized in this animation, in which each word appears as a link in a web of language without center, at the same time de-centered and re-centrable from any one point. The first and last planes may change their respective positions in a loop with neither beginning nor end.

6. Coda-ex

Digital recreations of Po-Ex seem to make clear that releasing poems from paper and from books (chapbooks, catalogues, etc.), i.e. from bibliographic coding, is not so much a way of pointing to the limitations of the printed page as it is a demonstration of the astonishing complexity of its topology and of the semiotic and hermeneutic effects of that topology. In fact, certain digital recreations fall short of the signifying potential contained in the paper text, thus helping to discard the
false dichotomy between the linearity of one medium versus the multi-linearity of the other. Considered as a critique of poetical codes, the experimental poem rightly sought to augment its knowledge of the specific materiality of graphic and linguistic mediation, i.e., of the media by which meaning becomes possible in the body of the poem. Being a technology for writing and reading, electronic tools extend this research through self-awareness of the semantic effects of their specific modes of mediation.

In digital recreations of visual and concrete poems we can see the relationship between a reading function, which reveals the complexity of the graphical source-code on page, and a rewriting function, which explores the potential of the computational source-code. If some properties are directly derived from the first, others are specific to the formal operations of electronic digitality. It is through that dialectical relationship that we can reassess the prospective value of the experimental poem as anticipation of a new technology for writing and as an exploration of the digital properties of natural language. In other words, it is not only digital technology that allows us to reread the experimental texts: experimental texts also help us in thinking the specificity of digital mediation in its intrinsic intermediality and generativity.

“Concretus” (2002), a digital work by Tiago Gomez Rodrigues, is one of the best demonstrations of the digitability of the concrete poem, that is, of the profound relationship between computer codes and printed-page codes. In these works we can see digital recreations as an extension of the machinery of writing and print, and as a renewed engagement with the complexity of reading acts.

Experimentation with the codes of writing and reading, a central feature of the experimental poem of the 1960s, and experimentation with a new technology for writing and reading, characteristic of electronic literature in recent years, occur in the context of a deconstructionist reconceptualization of writing and reading, for which both poetic practices continue to contribute. More than mere repository, the digital archive Po-Ex: Poesia Experimental Portuguesa—Cadernos e Catálogos (Po-Ex: Experimental Poetry Portuguese Chapbooks and Catalogues; 2008) should be understood as part of the ongoing process of research into the experiences and codes of signification. This digital recreation of experimental poetics is a remarkable contribution to that process.
WORKS CITED

1. Digital editions


*Hidra 2*, Edited by E. M. de Melo e Castro. Lisboa, Quadrante, 1969. 10 p. : il, 35, 5. Publication that includes real objects that function as «object-poems» (match box, balloon, stencil exercise sheets, fold-up sheets and envelopes).


*Visopoemas*, exhibition catalogue; Lisboa, [s.n.], 1965. Galeria Divulgação, Lisboa, opening 2/1/1965, with the participation of A. Aragão, E. M. de Melo e Castro, H. Helder, Barahona da Fonseca and Salette Tavares. «Concerto e Audição Pictórica» was a performance that happened in the Gallery exhibition room on 7/1/1965, with the participation of Jorge Peixinho and Mário Falcão.

2. Digital recreations

“Poemas Encontrados” (António Aragão). Recreation by Rui Torres, Jared Tarbel and Nuno Ferreira.
“Dois Fragmentos de uma Experiância” (José-Alberto Marques). Recreation by Rodrigo Melo.
“Mapa do Deserto” (E. M. de Melo e Castro). Recreation by Rui Torres and Jared Tarbel.
“Transparência/Oblivion” (E. M. de Melo e Castro). Recreation by Rodrigo Melo and Pedro Reis.
“Hipopótamos” (Herberto Helder). Recreation by Rodrigo Melo (Continuum).
“Edifício” (E. M. de Melo e Castro). Recreation by Rui Torres and Jared Tarbel.
“Algarismos Alfinete” (Salette Tavares). Recreation by Rui Torres e Jared Tarbel.
“Poemas em efe” (Salette Tavares). Recreation by Rodrigo Melo (Ferrugem).
“Ideogramas” (E. M. de Melo e Castro). Reading by Américo Rodrigues.
“A Máquina de Emaranhar Paisagens” (Herberto Hélder). Version in Sintext, an automatic text engine by Pedro Barbosa, based on code by Abílio Cav-alheiro.
“Homeóstato” (José-Alberto Marques). Version in Processing, by Eugenio Tisseli.

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