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Keywordsdigital poetry, concrete poetry, intermedia genres, computer animated poetry,
Augusto de Campos, E.M. de Melo e Castro, Tiago Gomez Rodrigues**Abstract**

I argue that there is an intrinsic connection between concrete poetics as a theory of the medium (i.e., of language, of written language, and of poetical forms) and digital poetics as a theory of poetry for the digital medium. This link is clearly seen in the use of concrete poems as storyboards and scripts for electronic texts, both in composing text for graphic interface static display and for animation. This essay deals with the adoption of electronic media by concrete poets, with examples from the work of Brazilian poet Augusto de Campos (1931-), and Portuguese poets E.M. de Melo e Castro (1932-) and Tiago Gomez Rodrigues (1972-).

Introduction

I argue that there is an intrinsic connection between concrete poetics as a theory of the medium (i.e., of language, of written language, and of poetical forms) and digital poetics as a theory of poetry for the digital medium. This link is clearly seen in the use of concrete poems as storyboards and scripts for electronic texts, both in composing text for graphic interface static display and for animation. It is as if the concrete approach to language and form, because of its constructivist and objectivist emphasis, anticipated the kind of reflection on media set in motion by the electronic page. Close attention to the visibility of language and to the materiality of reading, two of the central tenets of concretist texts, also underlie many of the poetic attempts to use the specific properties of electronic textuality in digital forms. This essay deals with the adoption of electronic media by concrete poets.

I want to point to the confluence of concrete and digital poetics in the work of Brazilian poet Augusto de Campos (1931-), and Portuguese poets E.M. de Melo e Castro (1932-), and Tiago Gomez Rodrigues (1972-). The particular significance of Augusto de Campos and E.M. de Melo e Castro for my argument is that they were both pioneers of concrete poetics in the 1950s and 1960s and they have adopted computers in their creative process in the early stages of the development of personal computing in the 1980s. Tiago Gomez Rodrigues, on the other hand, is a digital and multimedia artist, who, in his digital film-poem *Concretus* (2002), self-consciously extends concretist research of the materiality of sound and writing into the textuality of the digital medium, in which sound, text, movement and music combine in new intermedia genres.

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Figure 1: Edwin Morgan, "Message Clear" (1965)
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The adoption of computers as a means for literary creation has been fostered by concrete poetics. Because of its internalization of a theory of language as a structural system of signs, the concrete poem laboratory explores the projection of the paradigmatic axis into the syntagmatic axis. This probabilistic game with phonetic and semantic similarities and differences is spatialized on the page, in such a way that it foregrounds the fact that a text is always a set of instructions for reading itself. Consequently, the combinatorial procedures that have generated the rhetorical and typographic code of the poem become visible on the textual surface. In retrospect, the poem appears as a script of meaning, even if this meaning is not entirely determinable. Despite their reliance on the ambiguity that results from superposition of sense and sound states, many concrete poems focus on language and print as technical devices for producing and exchanging information. See, for example, Edwin Morgan's *Message Clear* (1965), where the bits and bytes that produce verbal meaning have been decomposed, as if the poem intended to present us with the machine-code for the miracle of transubstantiation that occurs in linguistic signs (Figure 1).

This is the kind of metalinguistic analysis that signals concrete self-reference to the poem's information code. For concrete aesthetics, the dynamics of a syntactical combination that resulted from phonetic and graphical attractions and lexical cross-breeding is the guiding principle of composition.



Its conscious and subconscious workings may be observed both below and above the word level: in the first case in the agglutinations, prefixes, infixes, suffixes, and various types of fragmentation of both lexemes, morphemes and even graphemes; in the second case, at the higher level of syntactic units, sentences, and texts. These procedures subject the semantic and ideological level of language to a combinatorial art that, at one and the same time, destroys and reconstructs the texture of inferences and recurrences that upholds discursive coherence. Concrete poetics moulds the structural and psychic materiality of the sign by linking its formal linguistic properties with the mind processing of those properties. Thus it is a poetics of spoken and written language, as much as it is a poetics of hearing and reading. Its hermeneutics starts at the physiological processing of audiovisual input, which transmutes the poem into a cyborg, that is, a cybernetic simulation of meaning as a specific processing of information.

From this point of view, the concrete poem is a kind of language generator which provides a microcosm both of the linguistic processes of word and sentence creation, and of the more basic and fundamental structuring processes of the phonetic, syntactical, semantic, and pragmatic elements that produce language. Language is not a mere repertoire of given elements, classes of elements, and combinations of those classes, but it is above all the possibility of expanding elements, classes, and combinations. Such a virtualization of the infinity of language has implied that poetical production should also take place at the more fundamental levels of the linguistic sign and written signification. Language as a means of production had to be pulled apart and scrutinized in its microscopic materiality.

Peeling of words and phonic fracture, for example, were proclaimed as programmatic principles by Haroldo de Campos (1929-2003) in his early series of five poems *ô â mago do ô mega* (1955-56). As happened in *konstellationen constellations constellaciones* (1953) by Eugen Gomringer, this semiotic phenomenology of language explodes the semantic units that were crystallized in lexemes and morphemes by means of fragmentation and unexpected recombination. Yet, by revealing the mathematics of language that turned the poems into structures of meta-data, the concrete poem often remains entrapped in the self-reflexivity of its verbal and iconic tools.

It is not a matter of coincidence that the poem about the poem (always a serious candidate to being the most frequent topic in the history of any type of poetry) has become perhaps the archi-theme of concrete poetry, as if every single poem had to be *a ars poetica* at the same time. That is clearly the case with Haroldo de Campos and Augusto de Campos, who, over the years, have been parodying and quoting, again and again, their own constellations of authors and texts in order to write about the poetical act (Homer, Chuang-tsé, Li Po, Guido Cavalcanti, Dante, Camões, Goethe, Novalis, Poe, Mallarmé, Maiakóvski, Khlebnikov, Pessoa, Pound, Joyce, T.S. Eliot, Sousândrade, Oswald de Andrade, Mário de Andrade, João Cabral de Melo Neto, O Cântico dos Cânticos, Ecclesiastes, John Cage, etc.). This never-ending attempt at making the poem a mirror of itself is one of the poetotechnical consequences that follow from the concrete emphasis on the objective, autonomous, and self-enclosed nature of the poem.

Topographic Poetics: Concrete Space Becomes Digital Space

For Augusto de Campos, concrete aesthetics was trying to extend and redefine the typographical objectivity of earlier modernist conceptions in a new technological context: That the program or script for the meaning of a text can be or has to be formalized is perhaps the price to be paid for the theoretical dimension of a language poetry that defines itself in those terms, and that puts most of its emphasis in inter-semiotic processes. In their attempt to unify the activities of criticism, poetry, and translation, by means of the "the critical devouring of the universal legacy" (Haroldo de Campos), concretists have developed a poetical consciousness of language that matched the science of linguistics and the science of cybernetics of our own time. More important than reifying the poem as a finished object, concrete poetry has contributed to the writing and reading of the poem as process for producing meaning. That ambitious program for researching self, language, and literary forms continues in the textual fields of the information age. The seamless way in which Melo e Castro and Augusto de Campos have transposed many of their works of the 1960s and 1970s into the digital medium suggests that there may be continuity between concrete space and digital space.

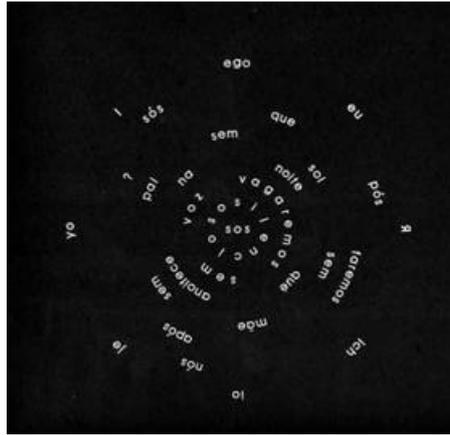


Figure 2: Augusto de Campos, "SOS" (1983)
© Augusto de Campos

Two examples will illustrate this transition between static paper page and kinetic computer display. *SOS*, by Augusto de Campos, was originally written in 1983 (published in book form in *Despoesia*, 1994, p. 27 - Figure 2, above). The title-word *sos* (which, in Portuguese, means S.O.S. and is also the plural form of "alone") stands at the center of seven circles of letters and words. At once a cosmological and psychological constellation, the ideogram can be read clockwise and counterclockwise, from the outer to the inner circle and vice-versa, and in various combinations of those four movements. The outermost circle is made of eight words, in eight different languages, for the personal pronoun "I". The text seems to re-enact the process of awareness from individual consciousness to human consciousness, by reference to cosmological mystery of origin, and also to human mortality. This diagrammatic reflection upon human solitude in the universe mimics planet orbits (by allusion to past and present scientific and literary representations) and also the pattern of electromagnetic waves spreading outwards from a source. The opposition "night"/ "sun" and "voice"/ "silence" are visually translated to the black and white surface of the page.

Augusto de Campos, *SOS* (digital version, 2003)
Copyright © Augusto de Campos

The second poem is a computer animation of *SOS* developed by Augusto de Campos using Macromedia Flash [See above: [Augusto de Campos, *SOS* \(2003\)](#)]. It was first published in the CD-ROM *clip-poemas (1997-2003)*, which comes with his latest book *Não Poemas (2003)*. The digital version adds color, movement, and sound to the original text, using it as script or notation for its digital re-mediation. Some of the possible reading paths have now been animated: the sequence of frames offers the viewer a privileged reading sequence. The simultaneity of the spatially organized page has been broken down by cinematic temporality, which is now a simulacrum of the reading movement, directing the viewer's attention to certain syntactical operations.

As the text unfolds, reading itself as it were, the reader becomes aware of the powerful association mechanisms that its ideogrammatic structure contained, including the way in which the act of reading the poem was designed so that it could be experienced as a replica of the cosmological questioning of the universe. While the animation silently reads the text, voices materialize the ultimate human horizon of self-consciousness, interrogation, silence, death, and oblivion. Echoes and

superposition of voices further stress this individual-collective cosmological ontology of hope and despair.

The digital medium, especially after the combined development of hypertext and large-scale computer networks, has led to the creation of literary genres that are specifically digital, i.e., genres that adopt the properties of the software and of the means of computational display as structural elements of poetic and narrative forms. Moreover, the digital medium has enabled authors to formalize the intra-textual and inter-textual connections, and it has also permitted the development of certain textual virtualities that are inherent to various typographical genres. That is what happens when typographic visual poetry is converted into kinetic poetry, or when combinatorial paper fiction becomes hyperfiction. In these cases, electronic transposition and publication is not a mere substitute for paper, because it interferes with specific textual aspects, and thus reconfigures the formal and semantic properties of objects according to the axis of electronic semiosis.

The Movement Of Reading

The Portuguese poet E.M. de Melo e Castro is also the author of an early series of computer-animated poems, *Signagens* (1985-1989) [1]. Those sequences adapt 18 of his concrete and visual texts. Again, by re-reading the paper versions of the poems, animation may be said to re-write those texts with reference to the specific reproduction technology that they are now using. In some cases, what the viewer sees is the actual accomplishment of what were suggestions of movement in the original paper version. However, a careful analysis of the suggestions of movement will discover that these have to be decomposed in two different types of reverberations: while one type is a function of imagining an iconic mimetic between ideogram and external reference, the other type is a function of the physical and semiotic act of reading the ideogram. We should bear in mind that many visual poems contain this double rationale of movement, i.e., a movement that is symbolically and mimetically associated to the object, and a movement that is the effect of the act of reading. What this means is that poem-object and reader-subject are split and re-joined in the field of perspective created by the consciousness of reading as a movement in the outer space of the page and in the inner space of the mind.

Animated versions make clear this multi-layered polysemy of movement that takes place in the mind of the reader of a visual poem. What often baffles readers of concrete texts is the paradox of finding themselves before minimal signs that are at the same time highly charged of references and meanings. For those readers, what appears as an impenetrable surface-only sign and an unimaginable single-word palimpsest work to reinforce the prejudice against concrete poetics. The fact that many poems attempt to break the discursive chains associated with the elements contained in the poems, very often discarding syntactic connectors, turns texts into a challenging notation that readers have to learn to read. The word, written or spoken, is never entirely taken for granted and even self-similarity, when it exists, is not necessarily a trivial poetical device, at least in the most interesting and complex texts.

In fact, animated versions, when they are but sets of instructions for reading ideogrammatic or pictogrammatic poems, can become didactic and, sometimes, they provide a poorer viewing/reading experience than the paper original. It should be noted however that many of the digital versions of concrete texts have added extra layers of meaning by integrating specific properties of digital production and reproduction technologies, such as the use of color and color effects, three-dimensionality, framing and point of view, human voice, sound effects, music, etc. The syntax of movement and sound, as well as the editing of image frames, enable texts to acquire the material and formal properties associated with cinema, for instance. Melo e Castro's computer text animations are outstanding in this respect: so much so that you can claim that those texts seem to have been waiting for electronic media [2].



Figure 3: E.M. de Melo e Castro, "objectotem" (1962)
© E.M. de Melo e Castro

One example is the version of his 1962 poem *objectotem* (Figure 3, ab). While the frames of the computer version re-create the reading sequence, highlighting the internal echoes between new words and the words contained in agglutinated word-object that makes the title, they also add a vocal interpretation (chorus and drums) that reinforce the representation of the poem-object as a collective totemic icon celebrated through ritual acts. Objectivist aesthetic theory is related to the archaic magical use of language whereby the computer version becomes a sort of ethnographical record of concrete forms. Vocalization and iconicity are used to suggest primeval body rhythms and primeval forms of writing [3].

Tiago Gomez Rodrigues' film *Concretus* (2002) is a six-minute narrative that contains digital animations of five ideograms: "tontura" by E.M. de Melo e Castro; "arranhisso", by Salette Tavares (1922-1994); "cascata", "cubo" and "esfera", by Tiago Gomez Rodrigues (Figures 4 and 5, below). Tiago Rodrigues is also the author of the completely digital soundtrack. This film is an inspiring example of the marriage between concrete aesthetics and digital technology. In *Concretus*, the reflection upon the specific properties of the medium takes place in the ingenious fore-grounding of three-dimensional digital animation techniques (shot angles, surface textures, light sources, shadows, etc.). *Concretus* is not simply illustrating the objectivist principles of concrete poems in a 3-D environment. Elaborate suggestion of camera movement around and inside the word-objects turns optical consciousness of the cinematic illusion into a central element of this narrative about the nature and possibility of concreteness in representation.



Figure 4: Tiago Gomez Rodrigues, "cascata" ["waterfall"] (2002)
© Tiago Gomez Rodrigues

The tension between iconicity/mimesis/self-similarity, on the one hand, and the abstraction provided by written signs and synthetic sounds, on the other, is the driving force of this work. This tension shows how a specific digital intermedia form has adopted concrete poetics to explore its own material possibilities for meaning. The distance between signifier and signified cannot be overcome, even when the signifier is the signified, because that is the interval that makes meaning possible. Considered as a narrative, this digital film-poem points to the paradoxical nature of its objects as concrete abstractions that exceed the pictographic logic that seems to contain them.

The movement suggested by the sequence of frames, shots, and angles is a radical re-writing of the original ideograms, asking for a whole new level of engagement with the concreteness of text.



"Cubo" Tiago Gomez Rodrigues 2002

Figure 5: Tiago Gomez Rodrigues, "cubo" ["cube"] (2002)
© Tiago Gomez Rodrigues

As for those genres that are intrinsically digital, mention should be made of the integration of the reproduction technologies for sound, and for reproduction and animation of images (digital or photographic) with the technologies for the reproduction of text. The appearance of iconic and cinematic genres, capable of bringing together elements of cinema, video, and music with narrative and poetical forms of textual nature, will probably be one of the future developments, as I can see in Tiago Gomez Rodrigues work. I can imagine, for instance, a new genre in which text and image will come together in a way that is different from what happens in comics books and in graphic novels, displaying an ensemble of properties that we now associate either with video, cinema, music, computer games, virtual reality, poetry, or the novel.

Theorists and practitioners of digital literary art, such as Michael Joyce, Loss Pequeño Glazier, Matthew Kirschenbaum, and Johanna Drucker, have argued that the technological features of the digital medium imply a new consciousness of textuality. For the on-going examination of the specificity of the digital medium, many of the most innovative experiments of 20th-century literature appear to be extremely relevant, because of their awareness of the fundamentals of language and textual display. According to Glazier, the electronic on-line space, for instance, cannot be seen simply as an environment or support for writing, since it is already an instance of writing by itself. From this follows the realization that poetical textures are already embedded in the poesis that defines the Web. In what he refers to as the digital field, Glazier identifies three forms of electronic textuality: a) hypertext; b) visual or kinetic text; c) works in programmable media (see GLAZIER, <http://epc.buffalo.edu/authors/glazier/dp/intro1.html>)

In my view, three properties justify the connection between the concrete poem and the digital poem that I have tried to outline: 1st) the spatialization that occurs in the concrete text is similar to the topographic and iconic writing of digital interfaces; 2nd) the creation of non-sequential reading paths (with multiple trajectories resulting from the breaking-up of language units) is similar to the non-sequential writing of hypertext; 3rd) the explosion of the text into a network of allusions anticipates the notion of "literature as a system under construction of interlinking documents" (Ted Nelson). By means of multiple cultural associations and literary allusions, densely packed in minimal elements, the concrete poem appears as cluster of constellated references and meanings. Because of those three properties, the opening of text to the probabilities of language by means of combinatorial procedures, which was the defining principle of concrete poetics, can now continue in the digital medium.

I finish with another poem by Augusto de Campos, both in static and kinetic versions: *sem saída* [no exit] (Figure 6, right). The author is playfully subverting the charge, aimed at the concretists, that they had led poetry to a dead-end street. As is characteristic with Augusto de Campos, the attempt to find a way out is literally materialized in the semiotic processing of signs that is required from the reader. He/she has to make sense of the lines in different colors that cross and superimpose on the page

Augusto de Campos, *Sem Saída* (2003)
©Augusto de Campos

With its echo of Theseus in the labyrinth, in *sem saída*, as in many other poems by Augusto de Campos, the act of reading with the eye and with the mind is always the quintessential hermeneutic experience. Once the reader has deciphered all the lines, he/she will realize that it is not yet the way out: that was only Augusto de Campos' way out, his own individual thread for traveling the labyrinth of life, language, and self. Crossword puzzle on the printed page, or computer mouse-clicking on the electron screen or liquid crystal display, it's up to the reader to find his/her way. Moreover, *sem saída* is also a self-reflective *ars poetica* about the electronic reading space, in which eyes and hand attempt to find their way in the multiple trajectories signaled by the graphical interface of hypertext pages. In its joyful and ironic celebration of the achievements and shortcomings of concrete poetics, the rainbow colors of *sem saída* seem to point to yet another tentative and provisional way out, this time offered by the digital medium as a way for extending and exploring the poetic insight about the strange mediations that bring the world to the self in the labyrinth of language [See above: [Augusto de Campos, sem saída \(2003\)](#)].

Notes

1. Signagens includes the following videopoems: As Fontes do Texto, Sete Setas, Sede Fuga, Rede Teia Labirinto, Vibrações, Um Furo no Universo; Come Fome; Hipnotismo; Ponto Sinal, Polígono Pessoal, O Soneto, Oh Poética dos Meios, Concretas Abstracções, Objectotem, Escrita da Memória, Infografitos, Ideovídeo, Diazulando, Metade de Nada and Vibrações Digitais de um Protocubo, Do Outro Lado. Other video and computer poems by Melo e Castro: Roda Lume (1968, 2 min. 43 s., remade in 1986), Vogais as Cores Radiantes (1986, 3 min. 10 s.) and Sonhos de Geometria (1993, 30 min., original soundtrack by TELECTU).
2. In fact, Melo e Castro produced his first film-poem in 1968, Roda-Lume [Wheel-Fire]. A computer animation of this text was later included in the series Signagens (1985-1989).
3. For copyright reasons, Signagens has never been published in CD-ROM format, and so it is not possible to include an example here.

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Author Biography

Manuel Portela has written books of visual and sound poetry, as well as a number of satirical poems. His early poems have been collected in *Cras! Bang! Boom! Clang* (1991) and *Pixel Pixel* (1992). He organized an international exhibition of visual and concrete poetry in 1993 - *Wor(l)d Poem/ Poema Mu(n)do*, which was held at the Museum of Figueira da Foz, Portugal. He has also exhibited his own visual poetry and he has created several digital poems. Since 1994 he has published 10 volumes of translation, including the first Portuguese editions of William Blake's *Songs of Innocence and of Experience* (1994) and Laurence Sterne's *The Life and Opinions of Tristram Shandy* (2 vols, 1997-98). He was awarded the National Prize of Literary Translation for *Tristram Shandy*. Many other translations have appeared in Portuguese and Brazilian journals and anthologies, including poems by Samuel Beckett, Edwin Morgan, Tony Harrison, John Havelde, Charles Bernstein, Mike Basinski, Bill Howe, Ron Silliman, Bob Perelman, Dennis Cooley, Robert Kroetsch, Roy Miki, Don Paterson. He has written short plays both for radio and stage. His latest book is *O Comércio da Literatura* [The Commerce of Literature] (2003), a study of representations of the literary marketplace in eighteenth-century England. Currently he works as an Assistant Professor at the University of Coimbra, Portugal. His latest research is concerned with textual forms in digital media.



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