

# Programmed digital poetry: A media art?

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*This paper examines the poetic modalities that Eduardo Kac considers to constitute media poetry, raising the question of the relevance of the term media. It comes to the conclusion that these poetic modalities can be considered elements of the same class of works, except that this class is more concerned with technotext and procedural work than with media.*

Keywords: media art / digital literature / electronic poetry / technotext / Kac, Edouardo

Note: each concept of the procedural model is defined at its first occurrence. All of them are listed in a glossary at the end of this paper.

## Introduction

The special issue of *Visible Language* that Eduardo Kac published in 1996, and even more so its reissue in 2007, is an invitation to consider digital poetry as a generic class of “media poetry,” which—like holopoetry, videopoetry, biopoetry, and, finally, every poetic modality—relies on any technical apparatus but books.

Several articles and books have been devoted to media poetry (or new media poetry) since the publication of *Visible Language* (e.g., Morris & Swiss in 2006, Strehovec in 2010, and Ismailov in 2012). However, the question of the relevance of the term *media* has never been raised. Kac’s book proposes a large variety of productions falling into the category of “media poetry.” Therefore, I invoke these works to discuss this issue.

One can ask whether this conception offers a better understanding of these poetic modalities. In fact, considering that these different approaches are subclasses of a generic class, they are inherently endowed with properties that are common to this generic class. Consequently, these poetic modalities would have common properties relating to the concept of “media.” One characteristic of this approach is that these modalities are not opposed to the book; it does not consider the book to be “the”

standard reference device. This is a shift from the theories of the 1990s. However, one should go further and consider the specific relationship these poetic modalities bear to the concept of media.

The term “media” has two definitions. The first one considers a medium as a semiotic vector: text, picture, sound, and so on. It is used, for example, in the term *multimedia* or *intermedia*. Jean-Pierre Balpe considers numbers and programs to also constitute media in this sense (Balpe 18). Another understanding considers media as vehicles for communication that resort to specific technologies: television, radio, the press, and so on.

I now examine how the different poetic modalities can refer to each of these definitions.

### **Media poetry per the first definition**

To consider the term *media poetry* as referring to the first definition amounts to assuming that poetry extends its field to semiotic conveyors that are not solely concerned with linguistic texts. This also accounts for the recent history of poetry and the relationship between these modalities and the twentieth-century avant-gardes. However, this approach also introduces some semiotic equivalence of these modalities’ apparatus. Implicitly, this conception does not consider the technotextual<sup>1</sup> dimension of these poetic modalities and tends to assume that poetry is inscribed in media, the apparatus being a mere support of these media. Such a comparison is common. For example, some people consider that an automatically generated text remains printable and linguistic. They do not make any distinction between the system of the book and the digital one. They disregard the relationship that the generated text maintains with the real-time program while the generator is running.

In contrast, other approaches focus on the code to the detriment of the screen rendering. They consider the program to be a text because of one or several of the following reasons:

- It is written in ASCII, just like printable texts, or its listing takes the form of a visual poem;

```

extern int
errno
;char
grrr
r,
;main(
int argc
argv, argc )
char *argv[];{int
r ;
#define x int i, j,cc[4];printf(" choo choo\n" ) ;
x ;if (P( ! i ) | cc[ ! j ]
& P(j )>2 ? j : i ){* argv[i++ +!-i]
; for (i= 0;; i++ ) ;
_exit(argv[argc- 2 / cc[1*argc]|-1<<4 ] ) ;printf("%d",P(""));}}
P ( a ) char a ; { a ; while( a > " B "
/* - by E ricM arsh all- */; }

```

Figure 1: Listing as a visual poem (Marshall)

– It can express abstract ideas or poetic sentences. Such is the case of Perl poetry;<sup>2</sup>

if ((light eq dark) && (dark eq light)	If light were dark and dark were light
&& (\$blaze_of_night{moon} == black_	The moon a black hole in the blaze of night
hole)	
&& (\$ravens_wing{bright} ==	A raven's wing as bright as tin
\$tin{bright})) {	
my \$love = \$you = \$sin{darkness} + 1; }	Then you, my love, would be darker than
	sin

Figure 2: Perl poem by Angie Winterbottom (2000) based on Jim Steinman's song "The Invocation"

– Programming languages are placed on the same semiotic level as natural languages, which results in mixed languages such as mezangelle,<sup>3</sup> called pinging in this conception

```

.....[context.exe consists of a reader].....
.....[u.].....
.....[who is an open-ended, active absorber]..
.....[ie will attempt 2 engage].....
.....[the vagaries of a networked text].....
.....[in this dead tree <static> media].....
..... . . .

```

Figure 3: Example of mezangelle (Mez)

These approaches disregard the executable program and ascribe any semiotic to it. For instance, Winterbottom's Perl poem can be run, although nothing is displayed on screen. Only variables in the computer's memory change.

Eventually, to consider digital poetry as media poetry in this sense requires ignoring some potentially significant features of the apparatus. It also puts different semiotic approaches on the same level: the writing of a program must be read in a printable form, just like any book, although “digital reading” resorts to temporality and interactivity as a result of the screen rendering. Moreover, it applies the same semiotic processes to radically different technical situations. Is this really the best solution? Consider the notion of a picture: do analog video pictures, holographic pictures, and digital pictures, performed in real time, really refer to the same picture media?

– The video picture is a set of fixed spatiotemporal units (frames) that are time-independent.

– The holographic picture only exists as the spectator’s movement induces an optical transformation of a wave-front; it is intrinsically an interactive picture.

– The calculated digital picture relies on the concepts of layer and object, not frame. It is composed of independent superimposed layers, each of which constitutes a computing object complying with its own transformation laws.

The video picture separates the spatial unit (the frame) from the temporal unit (the sequence). The unit of the holographic picture only exists in the dual space of the diffraction figure displayed on the holographic film. It is a pattern of spatial frequencies. This unit is neither spatial nor temporal and is not apparent to the observer. The calculated digital picture is a composite of calculated objects that have a disjointed time-space continuum due to internal or external interactivity. The media concept of the picture loses much of its semiotic relevance. How could we imagine that these fundamental differences of nature do not play a role in the interpretation process? Of course we could still find examples where they do not change anything, but in most cases they do. If the concept of a picture can then be used as a general paradigm, it is to the detriment of its all-encompassing essence as a media concept. Therefore, one cannot efficiently use the first concept of media unless one refers to the second one.

## **Media poetry per the second definition**

The second definition of media has the advantage of explicitly taking into account technology. To quote Eduardo Kac, media poetry is “useful in defining the broader field of technology-based poetic creation going back to the 1960s and projecting it forward into the twenty-second century. ‘Media’ connotes the various means of mass communication thought

of as a whole—in other words, technological systems of production, distribution, and reception” (Kac, *Introduction* 7).

As Kac acknowledges in the last sentence, the concept of media not only refers to the apparatus, but primarily to a system of organization of semiotic processes based on the media conception inherited from the Shannon model (1949)—production/distribution/reception—which implies that reception is a function subject to the apparatus. It is necessary to further examine the relevance of this point of view on the various modalities of technopoetry mentioned here.

### **The media conception**

Shannon’s theoretical model is in fact a technical theory of transmission. It is perfectly operational in this framework and is already used today in telecommunication (Battail). This model specifies the condition under which produced information can be received without noise. Shannon demonstrated that one could reduce the noise level to any value by increasing the redundancy of the message. Weaver applied this model to semiotic communication. The concept of media refers to this change in contexts. The main properties of this conception are:

- The possibility of extracting any information sent from the information received through the medium. It can be expressed by the equation:

$$\text{received information} = \text{information sent through the medium} + \text{noise}$$

This equation is at the founding of the functioning of the media. In human communication, it means that noise must manifest itself in a signal that seems to be semantically incoherent with the information otherwise received. Only through its incoherence can the brain extract it. For example, snow, random pixelation, a cut in a picture, or desynchronization of sound and image are incoherent with the normal behavior of the video image and can be overlooked in the semiotic process.

- The similarity of the recipient of the information sent through the medium and the recipient of the information produced. This means that a medium defines a unique modality of reception and that this modality is functionally defined by the technology of the media apparatus.

These two conditions apply in most communication situations. I now examine how media poetry modalities meet these conditions.

## **Analog and digital video picture**

There is no problem in the case of analog videopoetry. The information drawn is found in the picture shown.

However, it would be wrong to believe that digital simulation of video, even compressed via a non-destructive codec, behaves in the same way as an analog video picture. The analysis of a video file taken from Hans Richter's "Rhythm 21" has shown a behavior that is specific to digital technology. Xavier Hautbois and I carried out a temporal semiotic analysis (Bootz and Hautbois) of this file, each on our own computer, in order to identify the set of temporal semiotic units it is composed of. A temporal semiotic unit is a temporal structure, a law of temporal variations of a specific set of material properties (frequency, sound volume, chrominance, position, etc.) iconic to a type of movement. These units only exist through a perceived process. They are not coded at the editing level; that is, the score or film. The role of the output device is essential. We observed in the analysis that a short moment of the video displayed a semiotic unit on a CRT screen that was different from that on a TFT screen because these two monitors have a very different response time. This example shows a very typical property of the digital apparatus: lability. I define technical lability as the dependence on the apparatus of the perceptible event that is produced by running the program. The aspect of this lability is different from that of noise. It is very clear in this example: it is totally impossible to understand that the perceived unit is not the right one while watching the work on a TFT screen because it shows no incoherence at all with the rest of the work's temporal behavior. Technical lability often consists in replacing one sign with another plausible one. It cannot be detected, but it leads to further interpretation. This is semiotic lability. In this situation, the first media condition that argues that one can extract information sent from information received is no longer available, and the media conception is misunderstood.

## **Holographic picture**

Most often, holography consists of recording the diffraction figure of a scene on a holographic film. In this case, just like with the video apparatus, the information emitted constitutes the scene and the information received is the reconstruction of this scene. One may consider the holographic film to be a component of the apparatus or, in other words, an equivalent of the video camera. However, the situation of digital ho-

lography is much more complex. Nowadays, one knows perfectly how to calculate a diffraction figure *ex nihilo*. In this way, one can produce holographic pictures of scenes that cannot exist in the real world. Eduardo Kac did this in several holograms; specifically, in a 360-degree hologram that represents a 720-degree scene: the scene turns twice when the spectator turns once around the film (Kac, *Holopoetry* 141). One may then consider the information emitted (the virtual scene) to differ from the information produced (the diffraction figure). As such, the paradigm is no longer transmission, but transformation. It does not question the media conception. One must consider that a perennial physical object (the diffraction figure) has been created and that this object has been transformed in real time at the time of reception through the holographic apparatus in a perceived event: the reconstructed luminous wavefront. This event is not an object. It is a state that only exists while the apparatus is running and is transient for a given spectator because it depends on his or her movement and position. Both events convey an aesthetic representation: the scene constructed by the author and seen by the reader. These two representations are not equivalent: it is virtual in the diffraction figure and actual in the wavefront. These two representations do not coexist within the same space: the figure of diffraction conveys the virtual scene for the author only, whereas it is part of the apparatus for the reader, and the reconstructed scene is actual for the reader only.

From a semiotic point of view, the technical transformation consists in an actualization of a representation situated in another space. Reconstructed details not only depend on the diffraction figure, but also on the properties of the reconstructing light. Therefore, some details of the reconstructed representation may differ from the calculated or recorded representation, especially the color. However, the apparatus is not the only thing responsible for this actualization. Readers will read a representation in the reconstructed wavefront that also depends on their point of view and conceptions. Using a terminology that I introduced when talking about digital literature, one can say that the significant representation they will read depends on their apparatus depth (*profondeur de dispositif*). The apparatus depth is the set of archetypal cognitive representations a player resorts to in the system in order to create meaning. Among other things, it integrates a definition of what a text should be like. It constrains interpretation, providing codes to recognize signs. In the example, the reader could ascribe color or the position of the reconstructed scene with meaning with regard to the global space of the installation. These properties are not considered significant by the author and do not belong to the virtual representation the author designed for the diffraction figure.

In other words, one can apply the terminology of the procedural model (Bootz, *Formalisation*) to holopoetry: the actual scene the reader interprets is a *texte-à-voir* supported by the wavefront, which itself is a *transitoire observable*. A *transitoire observable* is the physical event the reader perceives (or experiences). It is part of the physical world. It can be recorded with a device (e.g., a video system) and then does not constitute a sign, but rather a signal or an object. The *texte-à-voir* is what is considered the text inside the *transitoire observable* and, using Klinkenberg's terminology (92–98), the *texte-à-voir* constitutes a signifier and the part of the *transitoire observable* in that what is recognized as its stimulus.

Reciprocally, the virtual representation the author designed for the diffraction figure also depends on her *profondeur de dispositif*. The diffraction figure is endowed with physical properties that do not enter the representation. In fact, the diffraction figure can mathematically be described with functions (convolution, multiplication) acting on other functions that describe elementary patterns. Among these, one can recognize main directions, resolution, and other physical properties of the reconstructed wavefront. Mathematical description is the grammar of the reconstruction logics of the wavefront and acts exactly like a non-digital program. This mathematical description of the diffraction figure constitutes the technical level of the representation (the “injected” virtual scene). It does not constitute the signifier of this representation for the author. For the author, the diffraction figure does not describe lines, circles, or any other pattern, but letters and words. Letters and words are not technical representations of the diffraction figure. Therefore, one recognizes that the “injected” representations constitute the author's *texte-auteur*. A *texte-auteur* consists of the signs that somebody recognizes in the physical material, called the “source” in the procedural model, and which the author has produced. In holopoetry, the source is the diffraction figure. Using Klinkenberg's semiotic, the *texte-auteur* is the signifier of the sign, and the part of the source from which it derives is its stimulus. When Eduardo Kac describes his holograms, he actually gives information on his *texte-auteur*. He neither describes the diffraction figure itself, nor the *texte-à-voir* that a reader would read, because he never gives the reader an opportunity to comment. Instead, he puts his own *texte-auteur* into words, producing a second discourse.

In the end, one can identify a situation of “narrow reading” in this communication between an author and a reader via a holopoem. The narrow reading consists in reading the sole *transitoire observable*. It is the only interpreting activity players can carry out when accessing the *transitoire observable* alone.



## The techno-text model

The model designed for the holopoetry system mentioned above can also apply to videopoetry and programmed digital poetry. It does not resort to the concept of media. In fact, it describes the technotextual aspect of these poetic modalities. In this model, author and reader are mere roles that can be played by one or several players, or by the same player at different times.

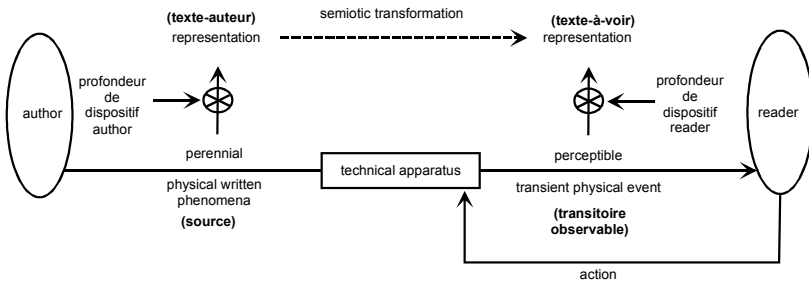


Figure 4: Narrow reading of a technotext

This yields the following correspondences:

Modality	Videopoetry	Holopoetry	Programmed digital poetry
Source	Active layer of the video film	Figure of diffraction	Source code and data
Texte-auteur for the author	Drawn poem	Calculated poem	Programmed poem
Nature of texte-auteur for the author	Actual	Virtual	Virtual
Transitoire observable	Luminous flux	Wavefront	Multimedia event
Texte-à-voir for the reader	Poem	Poem	Poem
Nature of texte-à-voir for the reader	Actual	Actual	Actual
Action	Possibilities of remote control	Movement	Interactive actions

It is necessary to transcribe the media conditions in this model. A poetic modality can be qualified as media poetry if these conditions are met:

- If the reader's *profondeur de dispositif* is compatible with the author's *profondeur de dispositif*, then the reader's *texte-à-voir* = the author's *texte-auteur* + other significant details
- Reception only consists of narrow reading

## Biopoetry

Consider only one example in biopoetry: Eduardo Kac's *Genesis* (1999). The apparatus of this installation is very complex. Eduardo Kac describes it in these words:

The key element of the work is an "artist's gene," a synthetic gene that was created by Kac by translating a sentence from the biblical book of Genesis into Morse Code, and converting the Morse Code into DNA base pairs according to a conversion principle specially developed by the artist for this work. The sentence reads: "Let man have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moves upon the earth."... The Genesis gene was incorporated into bacteria, which were shown in the gallery. Participants on the Web could turn on an ultraviolet light in the gallery, causing real, biological mutations in the bacteria. This changed the Biblical sentence in the bacteria. After the show, the DNA of the bacteria was translated back into Morse code, and then back into English. The mutation that took place in the DNA had changed the original sentence from the Bible. The mutated sentence was posted on the Genesis web site. (Kac, *Genesis*)

This is not a technotext based on an apparatus because *Genesis* operates through biology (proteins), optics (ultraviolet light), and the digital (the Internet). Regarding what happens in the gallery where the work is shown, net users are ascribed a role defined as "technical contributor" in the procedural model. They parameterize a technical variable of the apparatus; namely, the light flux on the cells.

The source is the initial state of the Petri dish. It is a genuine object because it is reproducible from one exhibition to another. Thus, even if the initial Petri dish is modified in the exhibition, it is perfectly known, it is a potential object. For Kac, it is associated with a *texte-auteur* that is a sentence taken from Genesis. The relationship between the source and the *texte-auteur* constitutes a series of transcoding actions: the sentence is encoded into Morse Code and the Morse Code is encoded into DNA through correspondence between the vocabularies of the two semiotic systems.

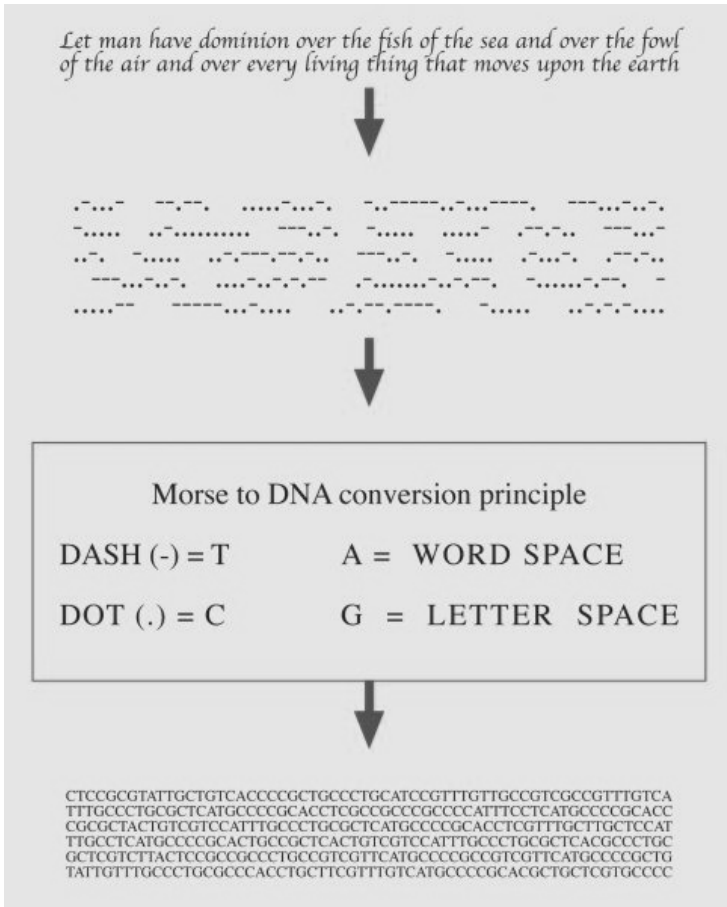


Figure 5: Transcoding the texte-auteur into the source (Kac, *Genesis 2*)

I certainly cannot affirm that these transcoding actions correctly apply to all proteins, so that the source may not be biologically perfect, but this feature has no meaning in the author's texte-auteur and the texte-auteur is an ideal situation of pure and noise-free transcription. The author's texte-auteur resorts only to the translation from one code to another. It ignores the actual role played by each code in a real system. For example, it overlooks the exact role played by DNA in a cell. It only resorts to its dependency on light. The texte-auteur, in fact, is not concerned with life or biology but with natural language. Eduardo Kac only resorts to biology as a part of the apparatus, not as a part of the texte-auteur. He is only interested in the initial and final states and on the semiotic action of the technical contributors. According to him: "In the context of the work, the ability to

change the sentence is a symbolic gesture: it means that we do not accept its meaning in the form we inherited it, and that new meanings emerge as we seek to change it.” This meaning given to the Internet users’ activity is typically a rhetoric figure specific to technotexts, which Katherine Hayles calls a “material metaphor.” She defines it as “a transfer of sense between a network of symbols and material apparatus” (Hayles 22). The term *metaphor* is certainly not the best because this general rhetoric process does not always function as a metaphor, but this is only a detail.

The transitoire observable is the current state of the Petri dish. The *texte-à-voir* would then correspond to the transformed sentence encoded in this Petri dish for a reader that has the same *profondeur de dispositif* as Eduardo Kac’s. In any case, the current DNA is not systematically decoded. It happens on some occasions and there is currently no information available on the Internet about any true result of this decoding. Therefore, the *texte-à-voir* remains virtual in the transitoire observable. There can be no narrow reading under these conditions. Spectators in the gallery are called “meta-reading” in another situation in the procedural model. They become aware of various aspects of the *technotexte* (*texte-auteur*, *texte-à-voir*, transformation) through mediation, not with the *technotexte* itself but with the web media designed for Internet users and installation designed for the spectators in the gallery. The installation itself resorts to several media to deliver the information: the printed material for the *texte-auteur* and the media projection for the transformation in the Petri dish. In this case, the techno-text as a whole is regarded as a document designed for a reading based on a different medium (i.e., the installation), which is totally independent of the technology used to ensure the work’s poetic essence. How can one speak of media poetry then? One should rather speak of technopoetry if this term means that the poem is a *technotexte*; that is, that it derives its poetic treatment from a specific technological one.

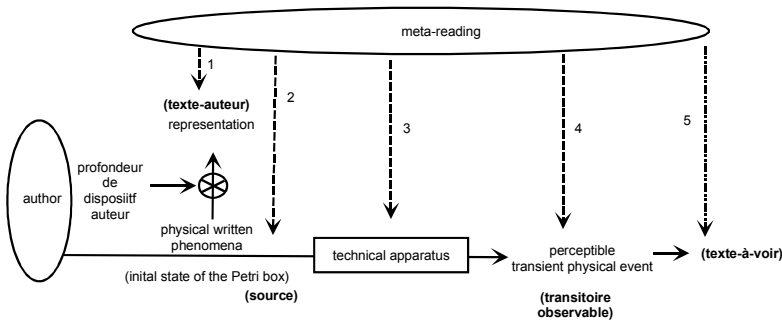


Figure 6: Meta-reading of the technotext in Kac’s installation *Genesis 2*

Spectators in the gallery access the meta-reading modalities 1, 3, and 4. They have no direct access to the initial Petri dish in modality 2, but to the initial DNA sequence. According to Eduardo Kac's presentation, modality 5 could have been accessed by Internet users.

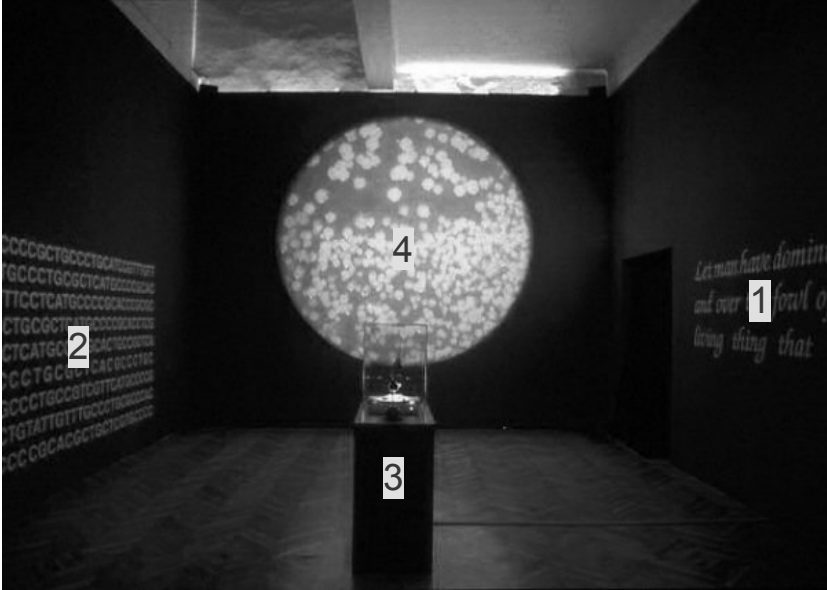


Figure 7: Meta-reading of the Genesis installation (Kac, *Genesis 2*)

### **Programmed digital poetry**

Programmed digital poetry combines the two schemes mentioned above. It allows for narrow reading (generally digital reading) and meta-reading, together or each on their own. Figure 8 indicates the possible meta-reading modalities in programmed digital poetry. Modality 6 concerns the reading of articles and documents produced by other meta-readers. Of course, all these modalities are subject to the meta-reader's *profondeur de dispositif*.

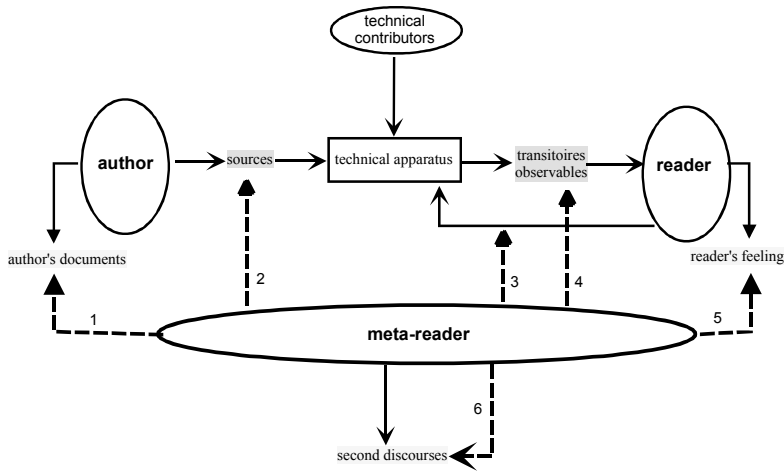


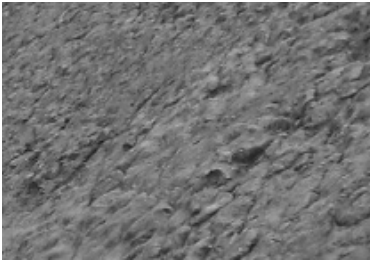
Figure 8: Broadened procedural model

Work analyses generally deal with narrow reading. Therefore, I shall not insist on this point here.

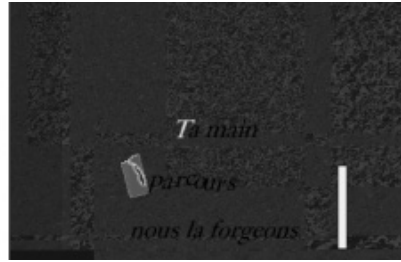
Meta-reading is a set of documentary readings. Experiments and transformations can be carried out on the documents accessed in order to gather knowledge about the work. Most often, meta-reading resorts to two or more of the six possible modalities. Only meta-reading can access the program, by reading it as a printable document. Meta-reading does not access the transitoire observable in the same way as narrow reading. It analyzes it and never reads it on its own, but in order to link it with other documents. For instance, the interpretation of the major rhetorical process that Katherine Hayles calls “material metaphor” requires modality 4 (access to recordings of the transitoire observable during different running processes) and sometimes modality 2. It is the case for Marshall’s program, whose listing represents a locomotive; that is, the program displays “choo choo.” If one considers that this display is the *texte-à-voir*, there is a metonymic relationship between the locomotive picture (which is a part of the *texte-auteur*) and the *texte-à-voir* (choo-choo). One may also consider that the picture only shows up while the program is running. In this case, the running process writing “choo choo” becomes a metaphor for the locomotive that requires energy to be set into motion and make a sound.

Regarding what processes are involved in meta-reading and what relationships they provide between different parts of the model makes it possible to identify different types of material metaphors.

Some e-literature works, such as my work *passage*, require both narrow reading and meta-reading in order to access the whole representation. For instance, its program contains a picture of a fossil used as a building material for a texture in the transitoire observable, although it is never displayed. One can interpret this feature in several ways. The apparatus could be a stone that conceals the fossil from the reader's eyes as the rock hides the fossil from the stroller's eyes. One could also recognize a material oxymoron that has the contrary notions of life and death—or dynamic (texture) and static (photo)—coexisting in the execution process.



Picture in the texte-auteur



Texture in the texte-à-voir

Figure 9: Representation per data in Bootz, *passage*

*Passage* also contains representations per instructions. It consists of *textes-à-voir* that will never be actualized, although parts of them are performed by the program. These representations question the algorithmic dimension of poetry. They show that algorithmic implementation cannot be without the running process. The pictures in Figure 9 show the transitoire observable of part of the program (called a braid) generated when separate from the rest of the program (left) and what produces the whole program (right). If one prints the written verses in order of their appearance, this yields two different poems. The poem “constructed” by the braid is still virtual in the program, even while running within the program.



Figure 10: Representation per instruction in *passage*

Other works are based on meta-reading even if it is never updated or, in other words, when no human player occupies this position in a given communication situation. This is a consequence of the disjunction between roles and players in the model. This is the case in the aesthetics of frustration. It considers that the player's activity and reactions, when put in a situation of close reading, are signs in the work for a meta-reader, even when readers read alone at home, especially because their activity reveals the relationship they bear with the language and semiotic systems at work in their *texte-à-voir*.

The apparatus resorts to two reception situations: narrow reading and meta-reading, one of which (meta-reading) does not directly access information through the apparatus of the work. This situation is contrary to the second postulate of media conception, which states that the recipient of the information received (the reader's *texte-à-voir*) and the recipient of the information transmitted (the author's *texte-auteur*) must be the same.

## Conclusion

The different media conditions do not apply to all these poetic modalities. What appears to be common to both is the concept of technotext



and the procedural conception, not that of media. This model is based on transformations of the information produced as well as a disjunction of reception into several modalities. It is compatible with the traditional conception of media only when the communication is limited to transmission (transformation of the position) and when one reception modality applies. However, this case is specific, not general.

## **Glossary of the procedural model**

**Player and roles:** the procedural model considers that everybody that is in contact with a physical component of the work is a player involved in an asynchronous situation of communication with the work. A player constantly plays a specific role in this situation of communication. There are three categories of role defined by their production and the part of the system the role accesses: *author*, *reader*, and *meta-reader*. The reader and meta-reader are concerned with the reception of the work, whereas the author is concerned with the production.

**Author:** in the procedural model, the author is not a person but a role that somebody can play at a given time in the system. The author is defined by its activity: the creation of a physical material called the *source*.

**Narrow reading:** the narrow reading is the activity of the *reader*. It consists in interpreting the *texte-à-voir* only, through interactions with the technical apparatus with which it is produced. Considering that the procedural model regards two complementary sets of situations of reception (*reader* and *meta-reader*), a distinction must be made between the activities of these two. Usually, the term “reading” refers to both the situation of reception and the activity of the recipient. The procedural model brings “reading” into several situations and activities. As such, this term becomes ambiguous and is no longer relevant. This is why it is not used in the model.

**Meta-reader:** a meta-reader is a generic term defining a set of roles that can access different parts of the situation of communication. Each role has its specific activities. A meta-reader is in a situation of reception (generally an observation). Except for the source, a meta-reader never accesses a single physical part of the system.

**Profondeur de dispositif:** the *profondeur de dispositif*<sup>4</sup> of a player is the set of archetypal cognitive representations the player uses to create meaning in the system. It integrates a conception of what a *text* should be like. It constrains interpretation, providing codes for the identification of signs.

**Reader:** the reader is not a person but a role that somebody can play in a situation of communication with the work. This role is defined by the fact

that the reader only accesses the *transitoire observable* and interprets the *texte-à-voir* that he or she deduces from the former. The reader is denied access to the *source*. It is the most common role in the reception of a work.

**Source:** the source is a part of the physical material the *author* creates. This part is transformed into a *transitoire observable* by the technical apparatus through the asynchronous situation of communication the *author* and *reader* are in. It is neither a sign nor a *text*. Most often, the *author* only creates a source without any other material.

**Text:** the term “text” is not considered only from a linguistic perspective, but from a general semiotic one: the text for a player in a given role (reader, author, meta-reader) is the set of signs the player interprets. It depends on their *profondeur de dispositif*.

**Texte-à-voir:** the *texte-à-voir*<sup>5</sup> of a player in a given role (reader, author, meta-reader) is what is considered as constituting the *text* in the *transitoire observable*.

**Texte-auteur:** the *texte-auteur*<sup>6</sup> of a player in a given role (reader, author, meta-reader) is the text this person recognizes in the *source*.

**Transitoire observable:** the *transitoire observable*<sup>7</sup> is the physical event perceived by the *reader*. It results from a transformation of the *source* by the technical apparatus of the system. It is neither a sign, nor a *text*. The *reader* accesses the *transitoire observable* only, not the *source*.

## NOTES

<sup>1</sup> According to Aarseth’s theory of cybertext, Katherine Hayles defines a technotext as a work “that connects the technology that produces texts to the text’s verbal construction” (Hayles 25–26).

<sup>2</sup> Perl poetry is poetry written in Perl programming language. It is not generated poetry: the program is the poem. Most often, the screen displays nothing, although the program is executable (it only manages variables in the memory).

<sup>3</sup> *Mezangelle* is an artificial poetic language invented by the Australian poet Mez Breeze.

<sup>4</sup> Eng.: apparatus depth.

<sup>5</sup> Eng.: text as seen.

<sup>6</sup> Eng.: authorial text.

<sup>7</sup> Eng.: transient observable state.

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## Programirana digitalna poezija: medijska poezija?

Ključne besede: medijska umetnost / digitalna literatura / elektronska poezija / tehnotekst / Kac, Eduardo

V članku avtor preučuje tehtnost trditve Eduarda Kaca, da lahko programirano digitalno poezijo obravnavamo kot medijsko poezijo. Obravnava poetične modalnosti, ki jih Kac prišteva k medijski poeziji: videopoezija, holopoezija, biopoezija in programirana digitalna poezija. Pri tem se sklicuje na dve opredelitvi medijev z vidika sporazumevanja: mediji kot sredstvo sporazumevanja in mediji kot semiotski prenašalec. Avtor ugotavlja, da prva opredelitev medijev ne upošteva specifičnosti posamezne poetične modalnosti in da je treba upoštevati tudi njihove tehnobesedilne lastnosti. Nato pa te modalnosti preučuje na podlagi druge opredelitve pojma »mediji«. Iz te opredelitve izpelje splošne značilnosti dela in jih preveri na delih, povezanih z različnimi poetičnimi modalnostmi. Avtor pokaže, da je procesni model, ki se uporablja za analizo sporazumevalne situacije v programirani poeziji, združljiv z drugimi poetičnimi modalnostmi, a da se ne sklada s pojmovanjem medijev. Članek zaključí z ugotovitvijo, da lahko te poetične modalnosti obravnavamo kot prvine iste kategorije del, vendar se ta kategorija nanaša bolj na tehnobesedilo in procesno delo kot pa na medije.

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