From OULIPO to Transitoire Observable: evolution of the French digital poetry

1   French movements of "generation of text"

1. 1   The generation of text

Generation in the broad sense strongly puts its mark on French digital poetry. Coding was a required passage until the 1990's but now, the development of software like Director, Flash, Max/MSP, pure data… makes it possible to program without explicitly coding. However, the authors I will speak about remain held to a practice of coding, in various forms. It is perceived like a part of the work. It is in this condition that one can speak, today, of generative literature. But the aesthetic statuses of the code and of the different media differ from a movement to another. One must thus make distinguish the time for which it was needed to code works, and the recent time where an author can make a program without coding. During the first time, the term "generation of text" refers to the possibility of building a text starting from a vocabulary and a generative grammar by using a computer. In this conception, the texts given to read do not preexist in the computer in the linguistic form, which they take on the screen. In the second time, the term "generation of text" refers to coding what appears on screen, to the fact of working the work even in the code, without delegating this task to "programmer" software. The contributions of the OULIPO and ALAMO groups correspond to the first period, that of LAIRE and Observable Transitoire, to the second.

Remember that literature meets computing by generation of text. Christopher Strachey generates love letters on Manchester Computer in 1952, but one often agrees that digital literature begins in 1959 with Theo Lutz's work *stochastiche texte* published in the review *Augenblick*[1]. Indeed, publishing generated poems in a review of avant-garde literature is more engaged from a literary point of view than the only programming of letters by engineers. A long period followed this act, during which digital literature was exclusively generative.

1. 2   OULIPO

Such a context could not miss meeting the French group OULIPO[2] (Ouvroir de Littérature Potentielle). Let us recall that the poet Raymond Queneau and the mathematician Jean-François le Lyonnais created the OULIPO group in 1961 in order to help Queneau to finish his famous work *Cent mille milliards de poèmes*[3]. It was not at all question at this time of an unspecified computing version of the work, but well of the printed version. The OULIPO has made the project to analyze, create and explore in a systematic way the formal constraints usable by authors and the algorithmic dimension of the OULIPO works, makes it possible to enrich the digital generation. However, the OULIPO meets tardily computing

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[1] Theo Lutz, *Stochastische Texte, augenblick* 4, H. 1, S. 3-9, 1959
[2] http://www.oulipo.net/
[3] a *hundred and thousand billion poems*.

practice, in 1975, when Paul Braffort programmed the *Cent mille milliards de Poèmes* for the Europalia exhibition to Brussels.

Several years after this exhibition, the OULIPO considered that the relationship between literature and computer science was a specific topic. Therefore, in 1981, part of Oulipians founded an independent group out of the OULIPO: the ALAMO. The OULIPO continued to shed light on the digital literary production without really participating on it. I have been invited, as a writer and theoretician in digital poetry, at the latest conference of the OULIPO, *Le pied de la lettre*, which was held in Vigo in 2009.

More generally, proponents of the constraint-based literature involved sporadically in France the debate on digital poetry. This is particularly the case of Bernardo Schiavetta, the publisher of the review *Formules*[4]. This journal is very active in the field of constraint-based literature and do not hesitate to invite contributions on digital poetry and to host speakers on this topic in the seminars and conferences that it organizes.

1. 3   ALAMO

Paul Braffort and Jacques Roubaud, both members of the OULIPO, created in 1981 the ALAMO[5] (Workshop of Literature Assisted by Mathematics and the Computers[6]). This group initially gathered 9 members: 4 oulipians (Marcel Bénabou, Paul Braffort, Paul Fournel, and Jacques Roubaud) and 5 not oulipians: Simone Balazard, Jean-Pierre Balpe, Mario Borillo, Michel Bonin and Pierre Lusson. 17 members were in the ALAMO in 2008. This collective thus did not know the same expansion as the OULIPO which developed sections in the whole world. Nevertheless, the initial core remained stable, except the remarkable departures of Balpe and Lusson.

The ALAMO continued to work on the way open by the OULIPO. He wanted to develop tools and computational methods usable by writers. He developed, therefore, a conception and design of a literature "assisted" by mathematics and computer science. He use computers as tools for the creation of constraints-based texts. The founding text of the ALAMO written by Braffort and Roubaud is very clear about this point:

> *For the ALAMO, the computer is a tool that facilitates the combinatorial work. It is therefore not specific creative computing works: the texts are written by authors, the machine's function is to provide, arrange, and reactivate them*[7].

This conception does not question traditional concepts of author, text and reader. It is fully consistent with the model of permutational Arts explained by Max Bense and then developed by the semiotician Abraham Moles in his book *l'art et l'ordinateur*[8] in which the work is defined as the total set of variations of a given structure. The ALAMO thus develops programs and computer simulation of classical or oulipian combinatorial texts. Previous member works are listed as part of the ALAMO, as Benabou's program of aphorisms[9] or

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[4] http://www.formules.net/
[5] Cf http://alamo.mshparisnord.org/membres.html
[6] Atelier de Littérature Assistée par la Mathématique et les Ordinateurs
[7] *« Pour l'ALAMO, l'informatique est un outil qui facilite le travail combinatoire. Il ne s'agit donc pas de création spécifique par ordinateur : les textes sont écrits par des auteurs, la machine a pour fonction de les disposer, les arranger, les réactiver »*
[8] Moles, A., *Art et ordinateur*, Tournai : Casterman, 1971; réed. 1990, Paris : Blusson,.
[9] Programmed in APL in 1979

Lusson's mathematical theory of rhythm[10]. Within the framework of ALAMO, Paul Braffort has been working the project LAPAL (Algorithmic Language for Assisted Production of Literature). This program exists[11] but it is not really used by authors. It only manages in fact the syntactic dimension of texts.

The ALAMO received strong government support. It also organized creative workshops at Chartreuse of Villeneuve les Avignon. Works by the ALAMO members have thus rapidly spread in the circles interested by the relationship between literature and the computer. This spreading had two effects. The first, beneficial, sensitized the opinion with this relation. The second, negative, presented this relationship as marginal and of little interest. Indeed, refusing any specific literary creativity, the alamien programs can appear as unsubtle realizations that only product often-uninteresting variation of preexisting textual structures. They do focus on the tool and leave aside the issue of semantics that is central, but difficult to manage. The Oulipien doctrine of the group explains this drop: OULIPO and ALAMO exclusively focus on the formal rules. The ALAMO still exists but has not integrated the dynamics of reflection about digital literature and has not acquired the habit of new programming tools. The group gathers yet mathematicians, poets and computer scientists. We can therefore say that the ALAMO completely stays in the first generative period.

When I presented works or conferences in the 1980s, the audience always thought that digital literature would be a creation of the OULIPO and followed his principles. The ALAMO helped to create this confusion between digital literature and OULIPO in French society. This situation has now thankfully mainly disappeared.

1. 4   Jean-Pierre Balpe

Jean-Pierre Balpe is a unique personality in the field of French digital literature. He played an important role in the evolution of this literature, on one hand by his conceptions that could not remain indifferent, and on the other hand by the position he has held in various organizations. As a member of ALAMO, he was advisor to the Public Information Library of the Pompidou Center for the exhibition "les immatériaux" that has played an important role in the history of French digital literature. He also has been director of laboratory Paragraphe at Paris 8 from 1990 to 2004, succeeded to Roger Laufer. He is also still secretary general of the *Action poetic* journal, a very important magazine in the French poetic scene. It has therefore largely educated the audience about the relationship between computer science and literature through the review.

Jean-Pierre Balpe is developing since 1975 a concept of generation different from that prevailing in the OULIPO or ALAMO. It takes into account the semantic and pragmatic levels of the generation process. His work is based on researches in natural languages processing. His first automatic generated poems were published in a print journal he created: *Hotel Continental*. He came to Lille at the end of the 1970's once a week to give courses and it is the name of the hotel he stayed at. He developed infinite roman since 1994, the year of creation of *Un Roman Inachevé*[12], a work that has never been published but integrated inside

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[10] formally developped by Pierre Lusson within the framework of the Centre de Poétique Comparée with the help of Jacques Roubaud. The Centre de Poétique Comparée was created by Lusson and Roubaud in 1969.
[11] http://attrd.free.fr/lapal/
[12] Balpe J.P, *Un roman inachevé*, 1994, oeuvre MAC programmée sous hypercard

another work, *Romans,* in 1996. He also collaborated with composers to associate sound and text generators.

Jean-Pierre Balpe also developed an activity of publisher of digital poetry. He founded the publishing house ILIAS, that has published several automatic or combinatorial generators on diskettes in 1994. But this enterprise ended. He also was a founding member of the company KAOS that was specialist in advanced treatment of language. This society published 4 issues of the review KAOS between January 1991 and January 1994. This review was the greeting card of the society. The third first issues are digitial publications of digital poetry. The last one is card game.

2 Towards a new paradigm

2. 1 Questioning the generative paradigm

The generative conception in which lie OULIPO and ALAMO considers that the text results from a linguistic calculus. Paul Valery expresses this conception in these terms:

> *It would perhaps be interesting to do once a work that would show the diversity that may present in mind, at each of its nodes, among which the author chooses the unique following sequence in the text. This would replace the illusion of a single determination and imitator of reality, by the possible-at-each-moment, which seems truer to me.*[13]

But in the 1980's, some authors coming from a variety of concrete and sound poetry movements thought that the prominence of formal and structural dimensions of the texts that automated or combinatorial generators made, was a reduction of the text to an abstraction. It became urgent to reintroduce "physicality" of the text, including through the inclusion of its space-time dimensions. Previous generative conceptions completely neglected these dimensions. They considered that texts only are linguistic structures.

2. 2 The development of telematics offered a new breath

The artist Orlan and the poet Frederick Develay led a review of telematic art called *Art Acces* which has produced three issues between 1985 and 1986. The first issue of this review has been shown in the exhibition "les immatériaux". It was impossible to code something on a minitel, but this device already offered limited possibilities for interaction: menu, moving to next page, automatic pages turning. It was sufficient to animate text. *Art Acces* gathered authors that would develop animated digital poetry during the next years: Frédéric Develay, Claude Faure, Guillaume Loizillon, Tibor Papp and myself.

Art Acces did not create literary movement but Frederic Develay gave me the opportunity to meet Tibor Papp in 1987. This meeting is the departure point of the creation of the collective L.A.I.R.E.

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[13] *Peut-être serait-il intéressant de faire une fois une œuvre qui montrerait à chacun de ses nœuds, la diversité qui peut s'y présenter à l'esprit, et parmi laquelle il choisit la suite unique qui sera donnée dans le texte. Ce serait là substituer à l'illusion d'une détermination unique et imitatrice du réel, celle du possible-à-chaque-instant, qui me semble plus véritable* (Valéry P., « Fragments des mémoires d'un poème », *Œuvres* I, Paris : Gallimard (La pléiade), 1957, p. 1467)

3   Movements related to animated generation

3. 1   French development of the animation of text

The first animation of text known in France goes back to 1982. It is entitled "deux mots" ("two words"). Its authors are Roger Laufer, who had created the laboratory Paragraphe in 1984, and Michel Brett, who was the director of the computing laboratory in Paris 8, and who animated Laufer's work in computer graphics. At this time, Michel Brett was a well-known researcher in computer graphics. But this work remained an experiment in a laboratory. It was not until 1985 that a French author, Tibor Papp, made a projection a a computer animation of text in the context of a literary event. It was during the issue number 10 of the polyphonix festival which took place at the Pompidou Center. Tibor Papp displayed his piece "Les très riches heures de l'ordinateur" number 1 on 10 TV screens. This work was programmed on Amstrad. This projection is the first assertion of the existence of a literary specifity of computed animation of text.

Tibor Papp is a leader in Hungarian avant-garde poetry. He is the creator and the publisher since 1962 of the review *Magyar Mühely* (Hungarian workshop) and lived exiled in Paris since 1961. He is a visual and sound poet.

3. 2   L.A.I.R.E.

I program texts since 1978. These first texts were computerized in 1979 by Jean-Michel Helincks at EUDIL, an engineering school in Lille. The development of family microcomputer led me to develop a non-generative design from 1985, spurred by Jean-Marie Dutey. Thus, following my meeting with Tibor PAP, we formed the collective L.A.I.R.E. (Reading, Art, Innovation, Research, Writing) during the prefiguration exhibition of the house of poetry of the NORD Pas-de-Calais in Beuvry, a small town in the north of France. The group included, besides Tibor and myself, Frederic Develay, Claude Maillard, who had first used in 1986 a synthesized voice inside a multimedia book, and Jean-Marie Dutey who worked with me in digital poetry within the association MOTS-VOIR I created in 1984. We had all produced literary computer works, except Claude Maillard who has not developed any work outside of her collaboration with Tibor Papp inside L.A.I.R.E. Jean-Marie Dutey had realized on TO8 in 1985 a major work of this period: *Le mange-texte*. I had carried out on TO8 the very first syntactic animation in 1986, *metamorphoses*. This piece will never be translated on PC. It is why it was only published in 2009, in *alire* 13, using a TO8 emulator.

The literary project of L.A.I.R.E was concretized in the review *alire* whose name is an anagram of L.A.I.R.E. The review was created in the Pompidou Center on January 16th, 1989 during an evening of La Revue Parlée. The issue number 0.1 of the review shown at this event is still a book-object. It contains printed works, diverse diskettes, and an audiocassette. The event itself is a performance on a background of digital poems screenings.

The true nature of the review only appears in the number 1, released shortly after the evening in January 1989. As the following issues, it has only diskettes and a short booklet that indicated the summary, a technical help and conditions of subscription. In the following issues, the booklet has been used to print theoretical thought of the group.

Claude Maillard expresses the project of L.A.I.R.E in the editorial of *alire* 1. She first claims that digital literature is a specific literary way:

> *Something is undertaken in* alire *between writing and machine providing the foundations of a work, which elaborates and implements the history of the letter. The history of the littera.*[14]

This way rejects the idea of an *"afterthought specific to computer engineering coming there to align, consume, mix work of writing"*[15]" The conception of L.A.I.R.E. acts on the reading and writing rather than on the text:

> *Something else is implemented whose route is out of any field of imitation. Something that requires an investment of another order. Of a different starting to read. Of a new taking to write*[16].

This project would of course be specified in subsequent issues. Its main features often anticipate cultural events that would prevail with the deployment of Internet more than ten years later. These precursory features are:

-   Coherence of the device. The literary device is conceived as an homogeneous whole computing device from writing to reading. Consequently, the running of program in real time at reading is an intrinsic moment of the work: the program of a work cannot be reduced to its algorithmic dimension. The running time is the embodiment of the work. Running gives to the work its sensual side. This point had a particular importance. It resulted in questioning how the digital work should take into account technological developments. L.A.I.R.E had this debate in 1993. It is well presented in the booklet of *alire* 3. It led to the reprogramming I did in 1994 of the entirety of works already published in *alire*. MOTS-VOIR, then became the publisher of the journal. It had any particular impact on the life of the review since, within L.A.I.R.E., I already ensured the programming of PC parts of the review, and Tibor that of the MAC parts. The fact that we always refused to diffuse programmed works on videotapes is another consequence of this conception.
-   The primacy of reading on screen. It first results from the above point and it imposes to thing the text different, not only as a fixed linguistic structure, but also as a spatiotemporal object whose linguistic structure can change with time. A new form appeared: the syntactic animation. Progressively, graphics and multimedia features have been introduced into works.
-   The existence of an intimate reading literature in a private setting. *Alire* allowed the development of a digital literature not only designed for performance.

The group could work thanks to the complementary of its members. We met regularly in Paris at Tibor appartment, approximately once a month, during several years. Tibor and me have a scientific background. I have a Ph.D in physics and Tibor a degree in electronics. We separately developed tools in a common programming language. We choose quick basic

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[14] *Quelque chose s'entreprend dans alire entre écriture et machine jetant les bases d'un travail où s'élabore et se transpose l'histoire de la lettre. L'histoire de la littera* (Maillard, Cl. « Editorial », *alire* 1, livret, janvier 1989)

[15] *après coup spécifique à l'informatique venant là pour aligner, consommer, mixer des travaux d'écriture* (ibid.)

[16] *Quelque chose d'autre est en œuvre dont l'itinéraire est hors de tout champ d'imitation. Quelque chose qui exige un investissement d'un autre ordre. D'une mise à lire différente. D'une prise à écrire nouvelle* (ibid.)

because Tibor first worked on PC and used this language. We worked in pairs: I worked with Jean-Marie and Claude with Tibor. Claude was not programming. I was programming for myself and, often, I helped Jean-Marie to realize his works. Jean-Marie translated Frédéric'works from Amstrad to PC using a computer animation software.

L.A.I.R.E. was never disbanded but it progressively stopped to work: Develay did no longer really participate to the activities of the group after 1994 and Dutey went to the Lyon region at the end of the 90's and it was more difficult to meet.

Alire already exists but it particularly marked French digital literature in the 90's:

- The works published at that time, or authors who have published, were found in all international digital poetry anthologies.
- The issue number 1 of KAOS only contains works by Jean-Pierre Balpe, Tibor and me.
- Jean Clément published in 1996 a paper about *alire* in the Encyclopedia Universalis. Even today, in this encyclopedia, the keyword "review", only links to the *NRF* and *alire*.
- *alire* collaborated with KAOS to the issue 138 of the journal SVM (science and life micro) in may 1996. SVM is a very popular journal. It is distributed at newsstands.
- *Alire* has been shown in several galleries and manifestations in France and in other countries. The gallery Lara Vincy organized in the multimedia gallery the most important exhibition in Paris, called "le temps d'*alire*" (time of *alire*) from October to December 1995.

Orlando Carreño, a researcher at the laboratory Paragraphe, shown in 1990, in his dissertation of Ph. D that *alire* is the oldest review that published the executable files of digital poetry. In fact it was the only journal to do this until the middle of the 90's. This prompted us to open the magazine, first to the French digital poetry authors from *Alire* 6 (1992), and internationally from *Alire* 8 (1994). This led to the published works by Jim Rosenberg, Eduardo Kac, John Cayley, Pedro Barbosa and others.

Almost all French authors, thus, were found in the review. Christophe Petchanatz, Philippe Castellin, Patrick Burgaud, Eric Sérandour published in *alire*. Works replied each other. It has gradually developed a coherent French aesthetics, common understanding and imaginary about the device, about the relation between the text and other parts of the system, about the relationship between the work and the reader. In this new conception, hypertext, generation and animation were no longer different genres but different complementary facets of works.

3. 3   Transitoire Observable

The collective Transitoire Observable is mainly based on thoughts by L.A.I.R.E. Transitoire Observable is not derived from L.A.I.R.E as ALAMO is from OULIPO. Transitoire Observable is in continuity with L.A.I.R.E. but takes into account the new international context of digital poetry born after the first e-poetry festival in 2001. This festival was the departure point of an international confrontation of ideas and practices. It was therefore necessary to internationally reaffirm the specificity of programmed digital works. This is what Transitoire Observable did.

Alexandre Gherban, Tibor Papp and me created this collective on February 6th 2003 on the initiative of Alexandre Gherban. He immediately federated several French digital poets: Jean-Pierre Balpe, Philippe Castellin, Patrick Burgaud, b-l-u-e-s-c-r-e-e-n, Eric Sérandour and French digital artists: Antoine Schmitt, Gérard Giacchi, Xavier Leton, Frédéric Drouillon. The collective made a conference in e-poetry 2003 at Morgantown and several digital poets joined it: Wilton Azevedo, Loss Glazier, Reiner Strasser and *alire* 12 was devoted to Transitoire Observable. The collective made several show in France.

The collective met regularly to discuss theoretical points and its website[17] mainly includes theoretical contributions. The group focuses on the computing device in its entirety and not only on surface forms seen with the screen. He introduces the concept of "programmed form", that is to say aesthetic forms that develop in part within the program and not only in media accessible to reader. He claims that literature or art can be characterized as digital insofar as they work on programmed forms. The founding text announced it in these terms:

> *We distinguish a path best suited to our view of approaching what can be named unambiguously a digital work. This pathway is the production of procedural transitional observable forms, independent computer forms, anchored in the programming and endowed with a large autonomy. The raw material used to produce these forms is neither sound nor picture, neither the text nor any mix of these three media, but a coded set of processes, immediate supports, just and necessary in any first place in the formatting of our creative projects[18].*

Alexandre proposed the name of the group. It is in fact the name of a concept I introduced in 2001 in my theory of digital written. In this theory, the "transitoire observable" is the multimedia event that appears to reader. It is so called because this event is a transient observable state of the program while running. The transient observable has nothing of a video work and less of a printed text. The group assumes that comment, and considers that both the program and its physical running are integral components of the work that are not linked by a causal relationship but that have a relative autonomy. My model calls this autonomy the "procedural autonomy". The founding manifesto of Transitoire Observable expresses this point:

> *We use more particularly the specificity of this device: it involves simultaneously the algorithms and the running process; it is controlled logic and unmanageable action. We work the paste of programmed works on computer and the procedural autonomy that characterizes them[19].*

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[17] http://transitoireobs.free.fr/to/

[18] *Nous distinguons une voie, la mieux adaptée à notre avis pour approcher ce qui peut être nommé sans ambages une œuvre numérique. Cette voie est la production des formes procédurales transitoires observables, formes informatiques indépendantes, ancrées dans la programmation et dotées d'une grande autonomie. La matière première utilisée pour produire ces formes n'est ni le son, ni l'image, ni le texte ni un quelconque mixage de ces trois médias, mais un ensemble de processus codés, supports immédiats, qui viennent et s'imposent en tout premier lieu dans la mise en forme de nos projets créateurs* (Bootz, Ph., Gherban, A. Papp, T., Transitoire Observable : texte fondateur, 1° février 2003, http://transitoireobs.free.fr/to/article.php3?id_article=1),

[19] *Nous utilisons plus particulièrement la spécificité de ce dispositif : il met en jeu tout à la fois les algorithmes et le processus d'exécution du programme, il est logique maîtrisée et action non maîtrisable. Nous travaillons la pâte des œuvres informatiques programmées et l'autonomie procédurale qui les caractérise* (ibid.)

The founding text envisaged the constitution of an analytical tool to describe these programmed forms. It was not possible to develop such a tool in the collective. It is now building in the laboratory Paragraphe within the framework of a more general theory on semiotics of the digital I make with Alexandra Saemmer, Serge Bouchardon and Jean Clément.

The project of Transitoire Observable was ambitious. I worked well with French authors and artists because all encoded their works. However, it was mostly a reference point for authors such as Wilton Azevedo or Loss Glazier, less affected by the literary potential of programming. Indeed, Transitoire Observable does not see programming as a model of the displayed text, a simple way to make it happen, but as fully participating in a programmed form, which implies that part of this form is not seen on screen. In the point of view of Transitoire Observable, programming is not a tool used to make a work, it is itself an aesthetic component of this work. This progressive divergence between the practices of its members, led the French authors to propose the dissolution of the collective. It was dissolved in December 2007, officially because the objective that it had assigned was achieved. But even if the collective is officially dissolves, it did not in fact completely disappear. Patrick Burgaud, Philippe Castellin and myself continue to collaborate on common projects. It is thus possible that Observable Transitoire reborn, because the concept remains relevant and current. It participates, with its own originality, to the general dynamics of code writing, while taking very different forms from those taken in the USA.

4   Conclusion

One notes a great coherence of this course. Some actors pass from a movement to another regarding the evolution of the use of the digital device. Conceptions interact and evolve together. The relationship between text and program is the main debated question. Increasingly complex answers are brought of one literary movement to the other, the various elements of the computing device are gradually integrated into the digital work, including in Transitoire Observable, the activity of reading with the concept of esthetics of frustration resulting from the works previously published in the French reviews *alire* or DOC(K)S. It must be pointed out that the conferences that I organized in 1993 and Alain Vuillemin in 1994, have been meeting opportunities, that have greatly contributed to the consistency of this dynamics.

Of course, other approaches coexist in France as elsewhere, sometimes because of authors working in more isolated but not less effective way. I think in particular of François Coulon who developed an early production of hypertext fictions, of Philippe Boisnard who exploited various devices and is now moving towards computerized performance, or of Annie Abrahams which positions the digital writing in the social sphere.