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## Redaksjonen

Maren Collier Ytterbø (redaktør)

Siri Aurland Bredesen

Erlend Thorin Kirkevold

Kirsti Lunde

Ida Lyche

Are Malvik

Astrid Sundset Moe

Brita Ramsevik Riksem

Emma Johnsen Rødli

Sigrid Elise Strømmen

Sunniva Strømsvåg

## Layout

Siri Aurland Bredesen

## Forsideillustrasjon

Ada Wikdahl

## Tidsskrift for språk og litteratur

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# Electronic Literature and Online Literary Databases

## The PO.EX and ELMCIP Cases

### 1. Introduction

This essay reflects on the shift of user interaction operated by online literary archives and databases. One can easily recognize a change of scenery happening in the current networked world, given the way authors and general public produce, catalog, tag, access, research, analyze, preserve and share knowledge.

In the field of electronic literature, the creation of several collaborative and open access databases attests this trend. For this purpose, I review two of them: the PO.EX Digital Archive of Portuguese Experimental Literature and the ELMCIP Electronic Literature Knowledge Base. My aim is to contribute to an informed view on how these

online literary databases are shaped and are shaping the field: What is their scope? How do they operate? What kind of navigation and user input exists? Why should they really matter?

Finally, I use these insights to develop some considerations concerning the relations between memory and archive, and different perspectives on electronic literature preservation.

### 2. A Change of Scenery for Literary Databases?

For the past decades, an increasing number of online archives and databases have been developed, marking an unprecedented change of paradigm in the way knowledge is

transmitted and users access library resources, artistic and literary works. From digitization, preservation and archiving models of e-books such as the Project Gutenberg, and multimedia resources such as the Perseus Digital Library, to core library databases of all sorts of artistic and literary periods; from digital archives of writers' collections such as Shakespeare, Blake, Dickinson, Pessoa, Borges, bpNichol or Wah, to archives, databases and repositories of media art, avant-garde art, new media art, and digital art, such as V2\_Archive<sup>1</sup>, mediaartbase.de<sup>2</sup>, UbuWeb<sup>3</sup>, Rhizome ArtBase<sup>4</sup>, and compArt daDA<sup>5</sup>, amongst plenty, not to mention the proliferation of labs and metalabs manufacturing archiving techniques and visualization software, the diversity of structural and ideological approaches, platforms and covered domains is highly rich. Thus, it is time to ask: Have these online databases changed our interaction with works (previous called *objects*)? Have they changed our reception of literary and artistic works? I guess the answer is an asserted and outspoken yes. Yet, have they managed to restrain our fear of loss? Let us come back to this issue under point 4.

In the field of electronic literature

there are currently several online databases that stress the need to record, store, describe, map, cross-reference, emulate, preserve and disseminate both creative works and critical writing from the Electronic Literature Organization's ELD (Electronic Literature Directory)<sup>6</sup> and the NT2 Hypermedia Art and Literature Directory<sup>7</sup>, to the PO.EX Digital Archive of Portuguese Experimental Literature<sup>8</sup> and the ELMCIP Electronic Literature Knowledge Base<sup>9</sup>, whose main features and modus operandi I am reviewing here in greater detail.

The collections of creative work and critical writing assembled by these databases, either by contributory and open submission or closed submission, help to disseminate the available content online and promote the search and the enhancement of the relation between author, work and reader/user. At the same time, they drastically change the way we are today accessing textual, sound and visual digital works and, more importantly, create a new ecology in the horizons of expectation of literary critical studies. The attribute of cross-referenced records of some of these databases and their interoperability assures a diverse kind of reception history, one instantly connected and displayed, although still not

immediately uncovered, but nonetheless opened to a greater macro analysis of their ultimate repositories: metadata contains literary pieces. E-literature (e-lit) evolves on the Web, and so does its archiving, preservation and researching environments.

Although digital media has the flaw of technological update on its back – one knows broken hyperlinks will always exist, and obsolescence is something to miss or dismiss – code is portable. Therefore, we can only hope that strong directories like these online literary databases will be around for years to come.

### **3. The PO.EX Digital Archive of Portuguese Experimental Literature**

PO.EX is a digital archive of Portuguese Experimental Literature that began in 2005. This literary database is coordinated by Rui Torres, at the University Fernando Pessoa in Oporto, Portugal, and was funded by the Fundação para a Ciência e Tecnologia [Foundation for Science and Technology] (FCT) and the European Union under two main research projects: “CD-ROM da PO.EX: Poesia Experimental Portuguesa, Cadernos e Catálogos” [The PO.EX CD-ROM: Portuguese Experimental Poetry,

Notebooks and Catalogues] (2005-2008) and “PO.EX’70-80: Arquivo Digital da Literatura Experimental Portuguesa” [PO. EX’70-80: Digital Archive of Portuguese Experimental Literature] (2010-2013).

The first project sought to conduct a survey – inventorying, documenting, researching and spreading the knowledge – about Portuguese experimental literature. This initiative has collected and digitized materials from the PO.EX movement, a movement of EXperimental POetry launched in the 1960s. With the publication of two main anthologies or *cadernos* (chapbooks), *Poesia Experimental 1* [Experimental Poetry 1] (1964), edited by António Aragão and Herberto Helder, and *Poesia Experimental 2* [Experimental Poetry 2] (1966), edited by the same authors and E.M. de Melo e Castro, an active movement of writers, artists and musicians was settled (the PO.EX): Álvaro Neto (Liberto Cruz), Ana Hatherly, António Aragão, E.M. de Melo e Castro, Herberto Helder, Jorge Peixinho, José-Alberto Marques and Salette Tavares. The heterogeneity of these authors – as well as Melo e Castro’s organization of the magazines *Operação 1* (1967) and *Hidra 2* (1969), in which several of the authors from *Cadernos de Poesia Experimental*, but

also Silvestre Pestana, collaborate – extended the spectrum of its creative production, addressing and causing the notion that the Portuguese experimentalism could neither summarize itself, nor be summarized by critics, as a concrete poetry movement, but rather as a proliferation of creative vectors with an open and truly *experimental* character. These experimental practices clustered around visual poetry, conceptual poetry, conceptual art, sound poetry, “object-poetry”, “poetic action” (or happening) and exhibitions.

Taking this perspective into account, the first research project of PO.EX focused on these practices and genres, building a digital archive of the main works, particularly the 1964 and 1966 chapbooks, catalogs, literary magazines and publications from the ‘60s. Besides boosting the engagement of several researchers and a number of published articles, book chapters and monographs (e.g. Baldwin and Torres 2014, Portela 2013), the key outcomes of the first stage were the digital remediation or recreation of concrete and visual poems in ActionScript (*releituras*, i.e. reinterpretations, literally meaning ‘rereadings’), and the production of a CD-ROM,<sup>10</sup> in which one can access

these reenactments and the theoretical volumes contextualizing the project, as well as read and manipulate the original digitized editions.

The second research project assimilated the continuity flux of the experimental movement in the 1970s and ‘80s, by collecting new material related not only to experimental fiction and intermedia poetry (visual, sound and videopoetry), but also to cybernetic literature, or cyberliterature (Barbosa 1996). Indeed, the PO.EX movement expanded in number and genres. Therefore, from the 1960s until the late 1980s, among several new magazines, anthologies, publications and exhibitions, other authors, such as Abílio-José Santos, Armando Macatrão, Antero de Alda, António Barros, António Dantas, António Nelos, César Figueiredo, Emerenciano, Fernando Aguiar, Gabriel Rui Silva, Pedro Barbosa and Silvestre Pestana joined or were somehow connected with the movement, widening the experimental practices with performances, happenings, installations, videopoetry, computer-generated literature (CGL) and infopoetry (electronic poetry). Thus, in this context emerges the first version of the PO.EX database, built in DSpace,

providing the authors' biographies and a theoretical framework on the movement and the project, with various scientific articles.

In 2014, after nearly ten years of effort, rescuing, digitalizing and emulating, the full archive appears. All the assembled material, which had long been out of print, only accessible via printed monographs (e.g. Melo e Castro 1988) or inaccessible, is really impressive. Among many others, E.M. de Melo e Castro's videopoems (1968, 1980s, '90s, '00s) and infopoems are available; Pedro Barbosa's first works of computer-generated poetry and fiction (1970s and '80s) were digitalized and emulated, containing the source code programmed in FORTRAN, ALGOL, NEAT and BASIC<sup>11</sup> on a mainframe computer; and it is ready, although not yet available, Silvestre Pestana's *Computer Poetry* (1981-83) emulations, a series of poems programmed in BASIC on a Sinclair ZX-81 and Spectrum, whose screenshots (photographs and printouts) one could just most likely acknowledge in the printed anthology *Poemografias: Perspectivas da Poesia Visual Portuguesa* (1985).

This feature creates a unique character within the PO.EX database and acquires added value with regard to other

literary databases in the field of electronic literature – from those starting in the same period, such as the Electronic Literature Directory and the NT2 Hypermedia Art and Literature Directory, to more recent ones, such as the ELMCIP Electronic Literature Knowledge Base – since the documented works and their multimedia files are primary sources created directly by the project's team. Furthermore, there are also structural differences, which can be mainly referred to the deep cross-reference record system and the degree of collaboration, e.g. creation of new records by external agents, which is one of the valuable points of the ELMCIP KB and, in lesser degree, of the ELD, more oriented towards the works' detailed description, with peer-reviewed records. However, the CELL consortium<sup>12</sup> promises to put into practice a higher interoperability among these databases and others, fostering a shared database search engine, cross-reference and the implementation of a common taxonomy. The current taxonomy of the PO.EX database is well argued (Branco, Portela and Torres 2013) and coherently articulates the diversity of materials and genres, divided in two major areas: materialities and transtextualities.

The role that PO.EX has been

developing in recent years has proved critical both in Portugal, Portuguese-speaking communities and the international network of electronic literature – having in mind that the movement of Portuguese experimental literature was mostly theorized by its authors, as *insiders* (e.g. 1981), one can consider the PO.EX project as its first systematic and comprehensive survey (even if anthologies such as Ribeiro and Sousa 2004 had deeply helped), providing all its archive online, thus enabling researchers and the general public open access to the original works, biographies, bibliographic data, and critical writing. Moreover, its impact has been crucial in disseminating cyberliterature (the “marginal ized” [sic] field, Saraiva 1980, cit. in Torres 2008) within the Portuguese literary studies and establishing Luso-Brazilian synergies and research threads, both in the associated research groups and the academic journal *Cibertextualidades*.

At the moment, future goals comprise the reassessment of this collection of sources, the consolidation of the project’s continuity and ensuring its organic growth as a database by covering recent decades: 1990s, 2000s and 2010s.

#### **4. The ELMCIP Electronic Literature Knowledge Base**

Electronic Literature as a Model of Creativity and Innovation in Practice (ELMCIP) is a research project (2010-2013) that gathered several European academic partners from Norway, Sweden, Finland, the Netherlands, Scotland, England, Slovenia, and a non-academic institution, New Media Scotland. Funded by the HERA Joint Research Programme and by the Socio-economic Sciences and Humanities Programme from the European Commission, the project is led by Scott Rettberg (University of Bergen, Norway). In addition to conferences, exhibitions, workshops, seminars, anthologies (e.g. European Electronic Literature), videos and numerous publication, the project’s main outcome was the development of the ELMCIP Knowledge Base.

The ELMCIP Knowledge Base was initiated in 2010 in order to become an open and collaborative online database, and was built in Drupal for that purpose. Since then, it was established as the benchmark project of the Bergen Electronic Literature Research Group. Available on the Internet and already hosting more than 9000 records (as of

December 3, 2013), the database aims to be a role model in the field of digital humanities. Amongst its distinctive features are: 1) it allows the submission and addition of new content by any user, as well as the edition of preexisting content, open access and shared knowledge in the domain of electronic literature; 2) it promotes the preservation and archiving of digital works, by mapping the creation and theory with various content-type records: authors/people, creative works, critical writing, events, organizations, publishers and journals, databases and archives, teaching resources and research collections; 3) it deepens the attestation and contextualization of the submitted records with multimedia files (documents, images, videos), which are directly or indirectly attached in its website (for a detailed description, see the “Project Report” by Eric Dean Rasmussen, former editor of the database, and Scott Rettberg [2013], or the most recent monograph on these issues [2014]).

Stirred by Theodor Holm Nelson’s proposal of an “ongoing system of interconnecting documents” (1981: 2/9), and following on the networked concepts of agency and actors in the Actor-Network-

Theory (ANT) by Bruno Latour (1987, 2005) and Michel Callon, one of the ELMCIP KB’s main practical contributions, with its wiki-like structure, is the expanding cross-reference created by several content-type records, which autocomplete when adding new material that references existing records. This feature hyperlinks records inside the structure itself, allowing a broader and prompt understanding of the field of electronic literature, and a more productive and long-term documentation of the works’ critical reception, both for authors, researchers and scholars interested in this area.

Another aspect that seems relevant to stress is pedagogical: first, the database contains records for courses already taught, including descriptions, syllabi and used references, acting as a worldwide learning tool in the classroom; second, by setting up research collections, it enhances further research on a free topic, increasing and aggregating knowledge about a given theme, whether it is or is not already latent in the ELMCIP KB. The research collections developed so far, especially those concerning issues of nationality, cultural region or language, have provided greater activity in the

database, because their curators have inserted thousands of new records on countries and languages hitherto less addressed in the international field of research. The addition of these collections has gathered dispersed records and lead to groups that had little critical coverage, such as the collections on Polish references, electronic literature in the Nordic countries, Brazil, Russia, Portugal, and the Spanish-speaking world.

As an organic virtual object that diachronically keeps growing, the ELMCIP KB achieved its initial objectives by fostering the practice and analysis of electronic literature – “understand how creative communities form and interact through distributed media,” “document and evaluate,” “develop pedagogical tools,” – and thus hosting, outside the American scene, an accessible, participatory and shared research platform. This fact not only encourages new ways of analyzing individual works, but also of building on its bibliographic archive of creative and critical records, as was recently demonstrated by the distant and macro readings of the field of e-lit, using the visualization software Gephi and network analyses, both at the University of Bergen’s 2013 Summer workshop and the ELO 2013

conference.

The ELMCIP KB’s impact as a translinguistic, transnational and trans-cultural research network is no longer merely European. It became one of the main available online databases about digital literary arts. One can point visible analogies between the ELMCIP KB and the Electronic Literature Directory, in terms of open access and user collaboration, although the ELD has a scholarly-driven record system, lacking deep cross-reference between creative work and critical writing, but gaining in the discussion field a kind of forum for contribution exchange. Moreover, unlike ELMCIP’s open folksonomy, the ELD’s initial controlled tagging taxonomy helps restricting the records’ classification, even if the peer-reviewed ELD 2.0 grew out to allow a folksonomy system (Tabbi 2007). In the same way, the NT2 Hypermedia Art and Literature Directory aims for a comprehensive review of each creative work, highlighting information, themes and platform with a striking web design layout, considering tagging taxonomy as an “inductive system” (Gervais et al. 2009: n.p.). Although it expands the field towards digital artworks, presenting excellent reviews, the NT2 directory neglects critical writing

as a direct resource and, more importantly, a policy of collaborative user input. Likewise, the PO.EX digital archive, in spite of focusing on Portuguese Experimental and Cyberliterature, lacks the same collaborative user input, but increases its potential by cross-referencing creative work and critical writing, and especially by preserving and emulating its source material as a unique feature.

Now, future goals lay ahead, but with the development of the CELL consortium it is expected that several international databases share a common taxonomy, folksonomy, metadata system and cross-referenced bibliographic records, benefiting research across platforms and the global access for users.

## **5. Preserving our fear of loss**

As evidence shows, the PO.EX and the ELMCIP databases, as well as others in the field, change our concept of traditional archive, our interaction with distributed media works – and not *objects*, as Philippe Bootz et al. well assert (2009, 2013: 155) – and our reception of digital literary works. They take on an idea that is both valued and undervalued by some e-lit authors, that is, that our relation between memory

and archive, being bordered by a sense of loss, should be addressed and enhanced in order to assure the works' lifetime (indeed, in some cases, afterlife) and its continuous *place* in posterity. The archive is our attempt to preserve memory, in this case, to preserve digital literary works from being lost. We foster the creation of multiple archives and databases in order to combat our state of fearing loss. As we try to preserve works from oblivion, we are also preserving our fear of loss.

Going back to the radix of the word *archive*, as Jacques Derrida points out, its meaning comes “from the Greek *arkheion*: initially a house, a domicile, an address, the residence of the superior magistrates, the *archons*, those who commanded” (1996: 2). One can then question the role and association of the archive – What is in fact being selected and deselected? – with power relations, namely by exploring what does a specific archive include and exclude, and who does it. This takes us into issues of institutionalization and legitimation. Derrida continues, by positing: “The archons are first of all the documents' guardians. They do not only ensure the physical security of what is deposited and of the substrate.

They are also accorded the hermeneutic right and competence. They have the power to interpret the archives” (2). This authority, inscribed by a physical and closed perspective of the archive, has been of course completely changed through the ages and, especially, in the digital era. If it is still “in this *domiciliation*, in this house arrest, that archives take place”, causing the fact that “the dwelling (...) marks [the] institutional passage from the private to the public” (2), the truth is that current models of digital archiving, even if *located* in a unique URL, entail a decentralized *domiciliation*, a virtual or *immaterial* character and an open perspective, encompassing a path that tends to substitute the concept of *archive* for that of the *database* – literally, the role model of a collaborative and open access online archiving database. And here, Derrida’s conception<sup>13</sup> for the future of science becomes more pragmatic: “As techno-science, science, in its very movement, can only consist in a transformation of the techniques of archivization, of printing, of inscription, of reproduction, of formalization, of ciphering, and of translating marks” (14-15). In reality, even when we change methods and/or platforms,

“the archivization [still] produces as much as it records the event” (17), not to say that it *produces* more (metadata) than it records (data). For that matter, the overabundance of stored and newly created information should directly target our main needs: either to provide access, dissemination and contextualized knowledge on electronic literature or to engage in a smart strategy concerning preservation.

Given the unstable character of distributed, networked and programmed media, and the consequent fragility of digital artworks, the issue of its archivization and preservation has raised a lot of debate and different critical angles. When dealing with digital artifacts, the fear of loss takes a higher magnitude, insofar the technology industry updating fever ravages everything much faster and accelerates the obsolescence of e-lit pieces, making us either dependent or careless of the so-called *vintage* hardware<sup>14</sup> and software to access original works in their original state of release. Otherwise, emulation *takes command*, as shown both by the PO.EX project and Philippe Bootz’s et al. recent reenactment of digital literary works (*littérature numérique*), reprogramming the collections of the *alire* electronic journal for the exhibition “Les

Littératures Numériques d’Hier a Demain” (2013) at the Labo from the BnF, in Paris. We could say that we have two options or perspectives: media archeology or media emulation. However, as degeneration is both thematized and structurally experienced in real-time, e.g. *degenerativa* (2005) by Eugenio Tisselli, it is more interesting to think about a third perspective, deeply connected to the second: the variability of the work over time as a process to be taken into consideration, a problem put forward by Philippe Bootz et al. (2009, 2013). According to their position, “it is impossible to define the original version of a work” (2013: 159) and even if one archives the code/program, one will always need to handle with the “execution process” as a mutable being by force of updated transcoding, provoking what the authors call a

labile characteristic. From then on, one cannot freeze the execution process to make it reproduce the same specific state (...) This goes against the idea of preservation, because it destroys that lability. Therefore, preservation should not be regarded as a problem of reconstruction of a state. Of course, the problem of preservation remains, for obsolescence constitutes a borderline case of lability. Obsolescence shall be defined in semiotic terms,

without reference to any technological evolution. (...) A work is obsolete as soon as its visible components no longer undergo any semiotic process. Defined as such, obsolescence characterizes the “semiotic death” of the work and does not necessarily superimpose on the obsolescence of the technological system. (159-160)

If “the problem of preservation remains”, new paradigms of archiving and edifying online databases should and do promote diverse organizational structures and account for a deep need to keep record of the field. Instead of strict classification, typified by a hierarchical mode of representation and indexation, these new paradigms of literary databases present a “decentred and reconfigurable network of texts” (Portela and Torres 2013: 9), amplified by multimedia files. The ELD, NT2, PO.EX and ELMCIP directories, different in scope, content, typology and user collaboration, gather a common objective of documentation and preservation, pinpointing our searches, but also fostering new tools and concepts specific to networked and programmable media.

The impetus to store, collect, preserve, and make accessible the transmission of knowledge of digital literary artifacts

is no doubt a consequence of the rapid and changing conditions of technology, hardware, software and network, but it is surely the demand of an eager community that seeks to question the environment in which electronic literature is created and to enable authors, critics, scholars, and a wide public audience of users/readers around the globe not only to take direct contact with works but also to provide a revision and new ways of thinking and analyzing older and newer computational literary works.

## Endnotes

<sup>1</sup> <http://v2.nl/archive/>

<sup>2</sup> This database gathers the directories of ZKM, European Media Art Festival Osnabrück, documenta archive and Kassel Documentary Film and Video Festival,

<sup>3</sup> <http://ubu.com/>

<sup>4</sup> <http://rhizome.org/artbase>

<sup>5</sup> <http://dada.compart-bremen.de/>

<sup>6</sup> <http://directory.eliterature.org/>

<sup>7</sup> <http://nt2.uqam.ca/>

<sup>8</sup> <http://po-ex.net/>

<sup>9</sup> <http://elmcip.net/>

<sup>10</sup> The CD-ROM is also available online at <http://po-ex.net/evaluation/>.

<sup>11</sup> These are different programming languages.

<sup>12</sup> <http://eliterature.org/cell/>

<sup>13</sup> Although I acknowledge the fact that Derrida's theory is primarily dealing with a different kind of archive, the archivization of psychoanalysis, it still sheds light on the notion and power relations one finds on today's models.

<sup>14</sup> The concept of *vintage* acquires a blurred meaning, since what is *new* today is *vintage* tomorrow. As Stuart Moulthrop thoroughly noted, "Staring down at our desktop, laptop, or palmtop machines – which we know will be obsolete long before we have paid for them (...) We are the generation (and generators) of nextness" (1993: 70-71).

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