

Methodological Rationale for the Taxonomy of the PO.EX Digital Archive

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The PO.EX Digital Archive¹ aims to create a digital representation of large corpus of intermedia literary works produced by Portuguese authors since the 1960s. In the process of remediating these works for the current digital networked environment we address metadata issues in a way that satisfies both our material and textual analysis of intermediality, and also the interoperability requirements of current information systems. The creation of a taxonomy for organizing and classifying a diverse array of materials such as those that constitute the digital archive of Portuguese Experimental Poetry (which includes Performance, Digital, Concrete, Spatial, Sound, Video, and Visual poetry) is a challenging task for the present researchers. The purpose of this article is to offer a brief rationale for our decisions, and to explain and illustrate our classification system.

I. Preliminary Reflections on the Meta-structure of a Digital Archive

The meta-structure of a digital archive should perform three different functions (see Portela, “O projecto ‘*PO.EX’70-80*’”): textual representation, contextual simulation, and interpretive interaction. In addition to digital facsimiles, text transcriptions, and other forms of remediation, textual representation means that we incorporate data about the original documents (full bibliographic records that include a description of the medium and technique, for instance), but also information about the digital surrogates themselves (processes, technical standards, formats) and the protocols for preservation and archiving (guaranteeing the integration and interoperability of this archive with other digital repositories). Contextual simulation refers to the ability of the archive to recover the history of the production (the genetic dimension of the archive) and the history of the reception of the works (the social dimension of the archive), including awareness of the archive as a new tool for producing context (i.e., for establishing its own network of intertextual associations among items in the database). Finally, the interpretive interaction describes the archive’s ensemble of digital functionalities as a critical environment for generating new interpretations. Document encoding (XML, XSLT, HTML5, etc.), metadata, database structure, and programming should result in the discovery of new patterns and relations through automatic processing. Aggregated searches according to open criteria that produce a radial constellation of documents or the possibility of adding user's annotations and curating online exhibitions selected from the database are two examples of this level of critical reinterpretation. The implementation of this function entails an understanding of the archive as a research, curatorial and learning environment.

II. The Organization of the PO.EX Digital Archive: Categories and Taxonomy

Our system for organizing a selected corpus combines several typologies of classification. Firstly, items stored in our database are placed within a specific subcategory, which in its turn is part of higher-level category.²

A. MATERIALITIES

Materialities are related to the medium of the items, i.e., to their material nature (which subsumes categories such as medium and technique). We understand materiality as the locus of both the emission and reception processes, within a specific semiotics of language. The framework of the selected communities implies a notion of "frontier," as Gérard Genette proposed in *Frontiers of Narrative* (1982), that is, sets of oppositions or distinctions operated by secondary modelling systems, through which each "community" is defined.

B. TRANSTEXTUALITIES

Following and adapting a category proposed by Gérard Genette in *Frontiers of Narrative*, transtextualities are based on a system of "relations" which includes reflexive manifestations of the symbolic systems involved. The distinction Materialities/Transtextualities allows us to differentiate through this latter modality the place of emission/reception from "all that sets the text in a relationship, whether obvious or concealed, with other texts," what Genette also refers to as "the textual transcendence of the text" (*Paratexts* 1). Lucien Dälenbach reserves for this relationship the designation of "restricted intertextuality" or "autotextuality" (see "Intertexte et autotexte"). Thus, we have subsumed as subclasses in the Transtextualities category three of the five relationships considered by Genette in *Paratexts* (1997): metatextualities, paratextualities, and hypertextualities, which we will now try to define and justify.

1) Metatextualities

According to Genette, metatextuality is understood as the relationship (comment) that binds a text to another text, of which it speaks, not necessarily by citing or naming it. It is, par excellence, the critical relation: “*metatextuality* is the relation most often labeled ‘commentary.’ It unites a given text to another, of which it speaks without necessarily citing it (without summoning it), in fact sometimes without even naming it [...]. This is the *critical* relation par excellence” (*Paratexts* 4). We introduce here, then, not only analytical self-reflexivity, but also the reflection made by other authors, or the attempt by the “group” to create a new “poetics” or, as Haroldo de Campos would say, a new way of looking at art as critical art, in a “timeless space” where there might be “a general heuristic of forms,” i.e., a dialogic space where one can – as Campos explains in an interview with E. M. de Melo e Castro – extrapolate “the specifically creative work to a general reading of the cultural series” (Melo e Castro *et al.*, 162; our translation). For the purposes of the current archive, Metatextualities have been divided into Autograph Metatextualities and Alograph Metatextualities. Distinction between critical material produced by the authors and critical material produced by other writers is crucial for tracking the processes of production and reception, and for placing experimental poetry in a larger cultural and critical context.

Metapoetic texts: A special case of metatextuality considered in the archive is the metapoetic text, i.e., the mixed dynamics between reflection and productivity, which, situated at the limits of criticism and poetry, freely explores a combination of theory and individual aesthetic practice. These metapoetic texts may imply both syntactic experimentation and an inter-semiotic connection of the word to pictorial forms, which means that they become highly involved with aesthetic and ideological processes.

In fact, the term “metapoetic” is already an extension (or extrapolation) of the autograph critical or theoretical metatextuality, one of the five types of transtextual relation proposed by Genette, although it was applied by the author only to the literary semiotic field. The extension (or extrapolation), which we intend to propose here, arises as a logical sequence of the first claim, and in a transposition process which is similar to the one Mikhail Bakhtin operated in his study of Dostoevski's polyphonic novel, i.e., conditioning and explaining “a completely new type of artistic thinking” or “a new artistic model of the world” (3).

Thus, we identify in experimental poetry the interaction of multiple semiotic fields and multiple languages which, in their combination, activate meaning. As Roland Barthes would say, this interaction amplifies meaning not only within the artistic worlds in which it develops, but also (through a double process of self-focusing and “poiesis”), within a specific time and a certain regard for the object (*Ensaïos Críticos* 143), and, in this case, to an individual look on a new combinatorial and plural semiotics of new “imagination of the sign,” to quote an important Barthesian expression (see Barthes, *New Critical Essays* 205-11).

2) Paratextualities

Initially understood as metatextuality (see Genette, *Introduction à l'architexte*, 1979), paratextuality later encompassed other type of relations, not entirely circumscribed, where the author catalogued “a heterogeneous group of practices and discourses” (Genette, *Paratexts* 2), separating them into editorial peritext (which includes formats, series, author's name, titles, dedications, epigraphs, notes but also prefaces; see pp. 2 and 16-343) and public epitext (interviews, conferences, correspondence, etc.; 344-370). Considered in close relationship with the public epitext, is the private epitext, in which Genette includes letters to friends or confidants, and diaries (371-403).

Because we consider them part of formal authorial interventions, we have included in the “Experimental Poetry” community certain editorial peritexts or public epitexts considered (or implied) by the author as *paratexts*, such as “covers,” “posters” and “catalogues.” We have also placed within the framework of metatextualities all forms of critical relationship, internal or external to the text.

3) Hypertextualities

Covering one of the most important phenomena of artistic evolution, hypertextuality – a transtextual field to which Genette devoted almost the entire text of *Palimpsests* and that he defined as “a relationship uniting a text B (which I shall call the *hypertext*) to an earlier text B (I shall, of course, call it the *hypotext*), upon which it is grafted in a manner that is not that of commentary” (*Paratexts* 5). Instead of the declared incorporation, or textual derivation, hypertextuality is materialized by a transformative operation, such as in the pastiche, parody or burlesque, in which, through synthesis and/or textual crossing, time would be abolished (though subtly retrieved by overlapping contexts) by a modification which, in addition to the play of aesthetic transformation, reaches a “beauté proper” (“Frontiers of Narrative” 62). As stated by Linda Hutcheon, these types of structural transformation exclude unitextuality (144).

The introduction of the term “hypertextuality,” in Genette's definition, however, implies a clarification of the relationship between his specific conception and the meaning that in the past decades has become widespread for hypertextuality as the description of active connections among electronic texts. While Genette's definition describes parodic and imitative relations among texts, the definition proposed by Theodor Holm Nelson (“A File Structure for the Complex, the Changing and the Indeterminate,” 1965) describes only references, pointers, and anchors linking texts or parts of texts to each other. The electronic hypertext gives technical and

functional expression to the notion of literature (and textuality) as a chain of intertextual relations, making explicit some of these relationships through the technical protocol that allows authors and readers to set an anchor point X in a text node that acts as liaison to the other text. These links are defined with different levels of granularity (from a file in its entirety to a single word or character) and can be pre-existing (in the sense that they are textually marked, as when a title of a work is referred in another work) or created *a posteriori* by the reader who activates the link nodes as an expression of his/her act of reading. Thus, hypertextuality as proposed by Genette must be distinguished from the concept of hypertextuality formalized by Nelson. While in the latter case, hypertextuality designates the explicit and technically processable connections within documents or across documents, in the first case the term designates form/content correspondence relations that imply the presence of a modified but recognizable earlier form/content in a later form/content.

C. CATEGORIES AND SUBCATEGORIES

As explained earlier, the main category created in our Digital Archive – Portuguese Experimental Poetry – is organized into sets of subcategories within them. The main subcategories are “Materialities” (including “digital,” “phonographic,” “performative,” “planographic,” “three-dimensional,” and “videographic”), and “Transtextualities” (including “Autograph Metatextualities,” “Allograph Metatextualities,” “Paratextualities,” and “Hypertextualities”). We will now explain them in more detail.

1) Materialities

The term *Materialities* describes material features of objects, events, and inscription technologies. *Digital Materialities* include works produced by computational processes (generative, permutational, intermedia, etc.), as well as related documents. This subcategory is

further divided into Codes, Emulations, Preparatory texts, Printed texts, Recreations, and Rereadings. *Codes* include transcriptions of computer programs used for generating the works. *Emulations* include recoding of old programs and obsolete platforms so that they can be executed in new operating systems according to the original code. *Preparatory texts* include preliminary (and generally unpublished) materials used in the preparation of digital works. *Printed texts* include facsimiles of printed texts which are the output of computational processes. *Recreations* include transcoding of old programs and obsolete platforms by rewriting the original code in new programming languages so that they can be executed in new operating systems. *Rereadings* include computational versions or variations created from non-digital originals.

One example of digital materialities represented in the PO.EX Digital Archive is “O motor textual. Livro virtual” [The Textual Engine. Virtual Book], by Pedro Barbosa³. This work is tagged with the keywords *Digital Poetry*, *Sintext*, and *Poemário*, thus enabling the user to find related entries in the database. It includes generative texts that were specifically emulated for this Archive, namely “Aforismos” [Aphorisms]; “Autopublicidade (variações experimentais para publicidade automática)” [Auto-ads (experimental variations for automatic advertising)]; “Aveiro (elegia minimal repetitiva)” [Aveiro (minimal repetitive elegy)]; “Balada do 25 de Abril (trovas electrónicas)” [Ballad of April 25th (electronic songs)]; “Didáctica (variações electrónicas)” [Didactics (electronic variations)]; “Elegia / Lengalenga / Lítania” [Elegy / Lengalenga / Litany]; “Ofício Lírico (requerimento oficial em modo de hipotexto)” [Lyric Letter (official request in hypotext mode)]; “Porto (trovas electrónicas)” [Porto (electronic songs)]; and “Teoria do Homem Sentado” [Theory of the Sitting Man], dating from the 1970s to the 1990s. It also includes links to several theoretical texts that were published in his books: “O motor textual. Livro virtual (Manual de Instruções do Sintext-W)” [Instructions Manual of Sintext-W]; “Sintext

- Versão de demonstração elaborada em Java”[Sintext - Demo version written in Java]; “O Motor Textual. Livro infinito” [The Textual Engine. Infinite Book]; and “Sintext-Web: um gerador de texto automático como instrumento computacional de criação literária” [Sintext-Web: an automatic text generator as computational instrument for literary creation].

Performative Materialities include readings and other artistic practices which are performed live with the possibility of audience participation. This subcategory is further divided into Performances; Readings; and Plays (and for each of them: Audio recordings; Photographs; Video recordings; Preparatory texts). *Performances – Preparatory texts* include preliminary (and generally unpublished) materials used in the preparation of performances. *Performances – Audio recordings* include sound recordings of artistic events which are performed live. *Performances – Photographs* include photographs of artistic events which are performed live. *Performances – Video recordings* include video recordings of artistic events which are performed live. *Readings – Audio recordings* include sound recordings of readings. *Readings – Video recordings* include video recordings of readings. *Readings – Photographs* include photographs of readings. *Readings – Preparatory texts* includes preliminary (and generally unpublished) materials used in the preparation of phonographic works. *Plays – Audio recordings* include sound recordings of theatre plays. *Plays – Photographs* include photographs of theatre plays. *Plays – Video recordings* include video recordings of theatre plays. *Plays – Preparatory texts* include preliminary (and generally unpublished) materials used in the preparation of theatre plays. *Plays – Printed texts* include published versions of theatre plays.

One example of performative materialities represented in the PO.EX Digital Archive is “Instalação: romance” [Installation: Novel], by Gabriel Rui Silva⁴. This work is tagged with the keyword *Performance*. Contents available include images of the performance, as well as the

book “Instalação: romance”, which was used in the front wall of the place where the performance took place.

Phonographic Materialities include works that were originally conceived as sound recordings, as well as related documents. This subcategory is further divided into Typescripts, Phonograms, Scores, and Preparatory texts. *Phonograms* include sound recordings (using technologies such as magnetic tape, vinyl, or cd-audio). *Preparatory texts* include preliminary (and generally unpublished) materials used in the preparation of phonographic works. *Scores* include written representation of sound works created according to conventional musical notation or other forms of graphical notation. *Typescripts* include typewritten documents related to works that were originally conceived as sound recordings.

One example of phonographic materialities represented in the PO.EX Digital Archive is the most recent record of sound poetry by Américo Rodrigues, “Porta-Voz” [Voice-Bearer (also Spokesperson)]⁵. This work, tagged with the keyword *Sound Poetry*, is an audio-CD in which Américo Rodrigues records his vocal performances, along with sounds made with toys, sticks and stones, megaphone, PVC tubes, etc. Although the entire contents of the record are described in detail, we have agreed with the author to include only four full songs (in MP3 format), since the record is still available for sale.

Planographic Materialities include two-dimensional works presented on flat surfaces using various techniques of inscription. This subcategory is further divided into Calligraphies, Collages, Drawings, Paintings, and Printing. *Calligraphies* include handwritten works concerned with the expressive use of the design of writing. *Collages* include works based on the juxtaposition and combination of various bidimensional materials. *Drawings* include works in which drawing techniques are used in combination with elements of verbal language. *Paintings*

include works in which painting techniques are used in combination with elements of verbal language.

Printing includes works produced with a variety printing techniques and materials. This textual type is further divided into Digital Printing, Electrographies, Engravings, Letraset, Letterpress, Serigraphies, Stencils, and Typescripts. *Digital Printing* includes works produced with ink-jet or laser printers. *Electrographies* include works produced with photocopying machines. *Engravings* include works produced with various engraving techniques (etching, woodcut, lithograph, linoleum, etc.). *Letraset* includes works produced with letter-transfer techniques. *Letterpress* includes works produced with letterpress techniques. *Serigraphies* include works produced with silk-screen techniques. *Stencils* include works produced with stencil techniques. *Typescripts* include works produced with typewriters.

One example of planographic materialities represented in the PO.EX Digital Archive is “Anagramático” [Anagrammatic], by Ana Hatherly⁶. This work is marked with the tags *Concrete Poetry*, and *Visual Poetry*. It includes image galleries of the four books published. Book I is “A maldade semântica” [The semantic evilness] (1966-68); Book II “A detergência morosa” [The slow detergency] (1966-68); Book III is “Leonorana” (1965-70), with thirty-one thematic variations of a vilancete by Luís de Camões; and Book IV is “Metaleitura” [Metareading] (1968-69).

Three-Dimensional Materialities include permanent or ephemeral three-dimensional works presented or installed in art galleries, buildings, parks, and other private or public spaces. This subcategory is comprised of Artists’ Books, Assemblages, Installations (Photographs, Preparatory Texts), Object-poems, and Sculptures. *Artists’ Books* include works which make expressive use of book forms. *Assemblages* include mixed media works in which assemblage

techniques are used in combination with elements of verbal language. *Installations* – *Photographs* include photographs of works in which installation techniques are used in combination with elements of verbal language. *Installations* – *Preparatory texts* include preliminary (and generally unpublished) materials used in the preparation of works in which installation techniques are employed in combination with elements of verbal language. *Object-poems* include works which make expressive use of found objects. *Sculptures* include works in which sculpting techniques are used in combination with elements of verbal language.

One example of three-dimensional materialities represented in the PO.EX Digital Archive is “Ex_Patriar” [Ex_Patriate], by António Barros⁷. This work, tagged with the keywords *Visual Poetry*, and *Spatial Poetry*, constitutes what the author calls an Obgesto [Obgesture = Object + Gesture], and it is also a re-reading of the PO.EX movement in the context of the current Portuguese financial crisis and resulting emigration in 2011. As an example of how this Archive interconnects the materialities with the metatexualities, two articles are linked here: “Um forçoso abandono da condição” [A forced abandonment of the condition]; and “PoemActo” [PoemAct], both containing critical explanations by the author.

Videographic Materialities include works that were originally conceived as videopoems or other kinds of videoworks, as well as related documents. This subcategory is further divided into Storyboards, Videograms-Preparatory texts, Videograms-Photographs, and Videograms proper. *Storyboards* include plans for image animation and video shooting. *Videograms-Preparatory texts* include preliminary (and generally unpublished) materials used in the preparation of videograms. *Videogram-Photographs* include photographs of video images. *Videograms* proper include videopoems or other kinds of videoworks (using technologies such as tape or digital video).

One example of videographic materialities represented in the PO.EX Digital Archive is “Roda Lume” [Wheel Fire], by E. M. de Melo e Castro⁸. This 3'01" work is tagged as *Videopoetry*, and it constitutes a representation of the first Portuguese videopoem by an author who was a pioneer in the field. The mp4 video file is also linked to storyboards, and theoretical texts introducing the poem.

2) Transtextualities

Transtextualities include texts about the works and artistic practices. The following sub-categories are represented: Autograph Metatextualities, Allograph Metatextualities, Paratextualities, and Hypertextualities.

Autograph Metatextualities include texts about the works and artistic practices produced by the authors themselves, and *Allograph Metatextualities* include texts about the works and artistic practices produced by agents other than the authors. This subcategory is further divided into Afterwords (to books and anthologies), Articles in Magazines and Journals, Articles in Newspapers, Books and Monographs, Chapters in Books, Critical Essays, Documentaries, Interviews, Introductions, Manifestos, Prefaces, Reviews, Theses and Dissertations. Most of these categories are self-explanatory. For example, *Articles in Magazines and Journals* include studies about the works published in literary and art journals, while *Articles in Newspapers* include texts about the works published in the periodical press. *Documentaries* include radio or television documentaries about the authors and artistic practices. *Interviews* includes audio, video or printed interviews. *Introductions* include studies about the works published as introductions to books, anthologies or other collections. *Manifestos* include programmatic texts about artistic practices.

One example of autograph metatextualities represented in the PO.EX Digital Archive is

“Motivações, práticas e reflexões .txt” [Motivations, Practices and Reflections .txt], by Fernando Nabais⁹. This is a text that explains the digital performance “.txt”, also available in the Archive. This text is tagged with the keywords *Sound Poetry*, *Performance*, *Visual Poetry*, and *Digital Poetry*. One example of alograph metatextualities represented in the PO.EX Digital Archive is “Abílio: as manufacturas da escrita” [Abílio: The Manufactures of Writing], by Eunice Ribeiro¹⁰. In this case, the author studied in the article, *Abílio-José Santos*, is also included as a tag/keyword, along with that of *Visual Poetry*, the genre of the works under scrutiny. The full text is available, both as an embedded PDF file, and a download link.

Paratextualities include textual elements that help frame works and artistic practices. This subcategory is comprised of Catalogues, Covers, Posters, and Other. *Catalogues* include exhibition catalogues. *Covers* include covers from different kinds of publications (books, audio-tapes, vinyl, VHS, CD-audio, CD-ROM, etc.). *Posters* includes posters and other printed advertisements related to festivals, book launches, exhibitions, performances, readings, and other artistic events. The category of *Other* includes materials that do not fit in the previous taxonomies, as well as works that mix different materialities.

Hypertextualities feature texts that are explicitly derived from other texts. This subcategory is further divided into Citations, Parodies and Pastiches. *Citations* refer to textual fragments from different sources. *Parodies and pastiches* include all texts that rewrite or explicitly refer their formal structure to other texts. Other categories and subcategories may be created as different types of materialities and metatextualities are added to the Digital Archive.

Finally, the category “Other” or “Mixed forms” may become necessary, given the hybridity of materials which may not fit in the previous taxonomies, including works that combine one or more of the seven material categories defined above.

III. Meta-Data: Keywords and Dublin Core Fields

Each item in the database is described according to two further classification systems: one controlled set of keywords (keywords or subject) and a number of Dublin Core fields.

A. KEYWORDS

The Keywords, understood inside Joomla as tags and which will grow in number in the future, are pre-determined, supported by a glossary of definitions and examples. They include: Performance, Digital Poetry, Concrete Poetry, Spatial Poetry, Sound Poetry, Visual Poetry, and Videopoetry. We will now provide our definition of each of these types of experimental poetry.

Performance – form of poetry that is based on multidisciplinary live action, thereby extending the poetic field to the expressiveness of the body and to the social and spatial context of the performed action (also known as Perfopoetry, Poetry-performance, Performance poetry, and Poetic action).

Digital Poetry – form of poetry that uses the computer as a creative literary machine, thereby promoting a symbiosis between artist and machine based on the exploration of combinatorial, random, multimodal and interactive algorithms (also known as Cybernetic poetry, Electronic poetry, and Cyberliterature).

Concrete Poetry – form of poetry based on the spatial organization and constellation of signifiers, leading to the abandonment of lines and stanzas as major rhythmic-formal units which are replaced by homologies and iconic relations between writing, sound or image inscriptions and meaning.

Spatial Poetry – form of poetry based on intersemiotic processes in which various sign systems (visual, audible, verbal, kinetic, performative) and materialities (three dimensional,

objectual, medial) are invoked and used in an expressive way.

Sound Poetry – form of poetry based on the expressiveness of the phonetic aspects of language, as well as the vocal processes involved in sound emission, thereby extending the concept of poem to that of musical composition, usually associated with performative manifestations and live actions, but also produced either by audio recording and voice manipulation or by the visual representation of the score (also known as Phonetic poetry).

Visual Poetry – form of poetry based on the dissolution of boundaries between visual and literary genres, in which the poem becomes a hybrid and intermedia entity, thereby overcoming the exclusive use of verbal and typographic elements, which are placed in dynamic interaction with visual elements.

Videopoetry – form of poetry based on the grammatical and communicative possibilities of the language of video, where the sign is iconized in a spatiotemporal action, articulating expressive elements such as the autonomous movement of shapes and colors, the integration of sound, and the interrelation of space/time.

B. ADOPTED DUBLIN CORE FIELDS

Finally, we have used some of the fields proposed by the Dublin Core Metadata Initiative (DCMI). The Dublin Core metadata schema aims to describe digital objects which are similar to those included in the Digital Archive of Portuguese Experimental Poetry. Its adoption is meant to ensure the interoperability standards required by CELL,¹¹ and to contribute to the construction of a specialized vocabulary which facilitates both the description of items and the search for information.

Name	Description
dc.description.filename	Filename.
dc.contributor.author	Author(s) of the work.
dc.contributor.editor	Curators, editors, coordinators, etc.

dc.contributor.other	Other contributors.
dc.title	Title of the specific object (not of the work in which it is included).
dc.title.alternative	Alternative or secondary title of the object, if applicable.
dc.title.translation	Translation of the object's title.
dc.provenance	Provenance of the object.
dc.page.number	Page number.
dc.date.created	Date of creation of the object.
dc.date.issued	Date of presentation/publication of the object.
dc.publisher.location	Place of publication.
dc.publisher	Name of Publisher.
dc.identifier.citation	Bibliographic reference for the work in which the object is included, according to Portuguese Bibliographic Reference Standard (Norma Portuguesa 405).
dc.identifier.issn	Numerical code which is a unique identifier for serial publications.
dc.identifier.isbn	Numerical code which is a unique identifier for non-serial publications.
dc.description.cotas	Library reference.
dc.description	Description of relevant general aspects.
dc.description.abstract	Abstract for the work.
dc.description.tableofcontents	Table of contents for the work.
dc.language.iso	Language.
dc.type	Typology of the object.
Collection	Number of the collection in which the object is included.
dc.subject	Keywords
dc.format.medium	Medium of the work.
dc.format.mediumsize	Size of the object.
dc.format.extent	Digital format for the object.
dc.format.extentsize	Size of digital object.
dc.scanning.equipment	Equipment used in converting the original object into digital form.
dc.scanning.responsibility	Person responsible for converting the original object into digital form.
dc.format.publicationtitle	Title of publication.
dc.format.publicationpages	Page numbers of the publication.
dc.format.publicationfeatures	Features of the publication.
dc.format.publicationsize	Size of the publication.
dc.rights	Information concerning object copyright (including intellectual property).

IV. Limitations, Advantages, and Uses of the Adopted Structure

A. POSSIBLE LIMITATIONS

We have made some effort to keep our system relatively flexible, as a response to the limitations of current taxonomies and systems of classification for literary forms and formats which are defined essentially by multimodality and by combination of literary and artistic genres, conventions, and techniques. This brief methodological reflection is meant to highlight both our awareness of the constraints of classification systems for our corpus, and our attempt to strike a balance between two desirable goals: the need to bring into the database structure some of the vocabulary and categories that reflect the original communities of practice, with their particular intentions and contexts; and the need to provide a critical and classificatory perspective which uses current taxonomies validated by scientific and academic communities, and often implemented in technical standards. Although the taxonomies described above have been generated through close observation of the specifics of the selected corpus, they were also subject to the requirements of higher-level descriptions that allow them to be read more universally and to be interoperable with other databases.

B. POSSIBLE ADVANTAGES

The adopted taxonomy has some advantages. First of all, it allows us to create an open model that can be used by other collections of experimental literature (for example, Brazilian Concrete Poetry, Spanish Digital Poetry, Portuguese Artists' Books, German Sound Poetry, etc.). Secondly, it promotes interoperability between similar databases, allowing for future integration and synchronization, in tune with the necessary convergence of information and collective research in digital humanities fields. Finally, it guarantees a structured database whose items can be easily accessed and retrieved through different types of interfaces for several purposes, which

we will briefly discuss below.

C. USES OF THE PO.EX DATABASE

An XML structured database such as the PO.EX Archive can be easily interfaced, i.e., it is possible to explore its complexity and translate its organized data into enhanced and adaptable interfaces. We should begin to imagine the database beyond its contingent web interface, perhaps even beyond the screen itself. Its online existence guarantees that a database can be used for multiple curatorial, pedagogical, research, and creative/artistic purposes.

Lev Manovich writes that classic content and media remixes are only one aspect of the “hybrid revolution.” Instead, “what gets remixed today is not only content from different media but also their fundamental techniques, working methods, and ways of representation and expression” (*Software Takes Command* 110). For the author, these crossover languages not only indicate the computer as a metamedium, they also open a path for movement across applications and services. Interfaces are thus linked to the broader concepts of variability, and database narratives. XML driven databases also open up a space for automated narrativity. Automation (see Manovich, *The Language of New Media* 52-54) allows computers to use templates or algorithms in order to create adaptable, customizable interfaces. Programmable agents can be used to automatically create the layout of documents, posts, and other presentational features. By assembling the proper data from a digital archive, one can format it using generic templates and scripts. Presenting and exhibiting the database thus requires and promotes new ways of understanding the concept of narrative itself, as different narratives (different interfaces) can be built from the same database.

1) Curating Virtual Exhibits

Curating refers mainly to keeping: the curator *keeps* the items that belong to a cultural heritage institution, museum or archive. Curating, however, is a dynamic activity: digital curators keep the contents of a collection, preserving them, maintaining the collection accessible, but constantly reinterpreting its assets. Indeed, curators also select elements from different collections to create conceptual and thematic exhibits. Whereas curators deal with expensive costs of transporting and installing selected objects for exhibits (insurance, shipping, installation, etc.), digital curation can easily use different available resources by simply programming interfaces that link and/or embed the interconnected resources.

Database structured collections, such as the PO.EX Digital Archive, can provide for the search and retrieval of digital assets, as well as certify the integrity of their digital contents. They can also contribute to the semantic and ontological continuity of the collection, all aspects that concern digital curators. Curation can thus be remediated within the context of new media and its database aesthetics.

2) Using Digital Archives in Virtual Collaborative Environments

One interesting tool for curating database exhibits is OpenSimulator (<http://opensimulator.org>). This is an open source multi-platform, multi-user 3D application server commonly used to create virtual environments which can be accessed through a variety of clients, on multiple protocols. Digital curators can use OpenSim to customize this virtual environment by extending the available framework. It is open, and free: the source code is released under a BSD License. The OpenSimulator features, among other things, several possibilities for exhibiting the database: multi-user 3D environments, 3D virtual spaces, multiple clients and protocols, and clients that create 3D content in real time. An Online virtual exhibition

in OpenSim (or similar) can thus be an organized presentation and display of a selection of items, and virtual exhibitions are available to anyone at any time. Mixed or cross-reality systems can also be combined to integrate 3D virtual worlds and ubiquitous smart spaces. It is possible to explore gesture-based interaction as well as context-based interfacing. The use of 3D architectural environments for virtual exhibitions can provide a curated experience of a certain collection, with not only information from the database, but also through display and interaction with selected digital artifacts.

3) Pedagogical Uses of the Database

It is possible and easy to create pedagogical resources that use the information from databases. The database is available and adaptable to different educational contexts. Didactic uses of databases are clearly one of their most powerful possibilities. The structured metadata describing individual cultural artifacts can be easily exported from a given database and integrated into commonly used pedagogical technologies, such as learning management systems, blogs, wikis, creating automatic exercises and tests, modules and lessons, or exporting to PowerPoint templates according to certain topics. Examples include, in the case of the PO.EX archive: different materials used in visual poetry, the role of storyboards in sound and video-poetry, history of media poetry, emulations of digital poetry, reception of performance poetry – in academic dissertations or in newspapers and magazines, for instance. The development of a set of model courses, including sample lesson plans and assignments, could be accomplished by making open templates for teachers to use in their classes.

Finally, the database clearly points towards research enhancement, as it is easy to export organized bibliographies to Mendeley, BibTeX, Zotero, CiteULike, Google Scholar, etc. Its existence provides a new environment for theoretical and critical practice, as these intermedia

materials have never been collected and related on this large scale.

4) Exploring the Database with Visualization Tools

There are several available open source tools that allow for visual representation of data, and with these tools it is possible to generate different critical visualizations. ImagePlot,¹² for instance, would allow for, among many other things, a whole image collection to be seen in a single visualization, showing the actual images instead of only their representations in lines and dots; it would also allow for the dynamic organization of images according to their dates, content, visual characteristics, etc.; the discovery of sets of images that are similar, both in terms of content as well as from visual properties; understanding similarities and differences; understanding the evolution of the critical receptions of works across time; understanding the evolution of the database; or turning different forms of visualization into animations.

5) Appropriating and Remixing the Archive

Being open, and containing a great amount of images, sounds, videos, texts and scripts, the database is the ideal starting point for artistic and creative remixing. Giving artists the ability to share, use, or build upon works seems important in the case of experimental poetry, because many of the works are themselves derivative, i.e., hypertextual: appropriations, intertextual parodies, collages, found texts, etc. New software tools could be conceived in such a way that the adaptation and performance of materials from the database would result in expressive rewritings of the contents of the archive. By giving full access of our databases to artists, we would be creating a collaborative, collectively built sort of intelligence, one that would bring the appropriation and remixing possibilities of the digital archive to a new level.

V. Conclusions

All items in a digital archive have to conform to a database structure and to the algorithmic processes that make them available for human perception and manipulation. Retrieval mechanisms are strongly dependent on metadata and on their capacity for generating associations among items. Developing taxonomies for linking and displaying data is a crucial critical intervention in defining the configuration and uses of the archive. Our rationale in the PO.EX Digital Archive consists of a series of overlapping taxonomies: (1) a definition of materialities as the combined description of materials, media and techniques (digital, phonographic, performative, planographic, three-dimensional, videographic); (2) a definition of transtextualities as the combined description of (autograph and allograph) metatextualities and paratextualities; (3) a set of keywords based on categories created by the original communities of practice; and (4) the adoption of Dublin Core fields as a series of standardized and interoperable descriptors. The usefulness and shortcomings of our typology and overlapping classification schemes will become clearer as current and future users the PO.EX Digital Archive engage the affordances and constraints of this database.

- 1 PO.EX Digital Archive (<<http://www.po-ex.net>>).
- 2 We are currently using Joomla (<http://www.joomla.org>), a free Content Management System used for the creation of digital repositories, enabling the access and preservation of different types of digital content (text, images, moving images, etc.).
- 3 Barbosa, Pedro; and J. M. Torres. *O motor textual*. Porto, Edições Universidade Fernando Pessoa, 2001. <<http://www.po-ex.net/taxonomia/materialidades/digitais/pedro-barbosa-o-motor-textual-livro-virtual-infinito>>.
- 4 Silva, Gabriel Rui. *Instalação: romance*. Oficina de Cultura, Almada, 1986. <<http://www.po-ex.net/taxonomia/materialidades/performativas/gabriel-rui-silva-instalacao-romance>>.
- 5 Rodrigues, Américo. *Porta-Voz*. Audio CD. Guarda, Bosq-íman:os records, 2014. <<http://www.po-ex.net/taxonomia/materialidades/fonograficas/americo-rodrigues-porta-voz>>
- 6 Hatherly, Ana. *Anagramático* (1965-70). Lisboa, Moraes Editores, 1970. <<http://www.po-ex.net/taxonomia/materialidades/planograficas/ana-hatherly-anagramatico>>
- 7 Barros, António. *Ex_Patriar*. Coimbra, 2011. [Collection of the Museum of the Foundation Bienal de Cerveira] <<http://www.po-ex.net/taxonomia/materialidades/tridimensionais/antonio-barros-ex-atrilar>>
- 8 Melo e Castro, E. M. de. *Roda-Lume*. 1968. <<http://www.po-ex.net/taxonomia/materialidades/videograficas/e-m-de-melo-castro-roda-lume>>
- 9 Nabais, Fernando. *Motivações, práticas e reflexões .txt*. 2007. <<http://www.po-ex.net/taxonomia/transtextualidades/metatextualidades-autografas/fernando-nabais-motivacoes-praticas-e-reflexoes-ponto-txt>>
- 10 Ribeiro, Eunice. “Abílio: as manufacturas da escrita.” <<http://www.po-ex.net/taxonomia/transtextualidades/metatextualidades-alografas/eunice-ribeiro-abilio-as-manufacturas-da-escrita>>
- 11 The PO.EX Digital Archive is a member of CELL, the Consortium on Electronic Literature (<<http://eliterature.org/cell/>>), hosted by The Electronic Literature Organization, and it is an initiative aimed at developing partnerships among organizations, universities, and publishers for the purpose of sharing research in the area of electronic literature. The members of CELL are among several of the ELO’s partner organizations (see <<http://eliterature.org/partners/>>).
- 12 ImagePlot (<<http://lab.softwarestudies.com/p/imageplot.html>>) is a free software tool that visualizes collections of images and video, developed by the Software Studies Initiative with support from the National Endowment for the Humanities (NEH), the California Institute for Telecommunications and Information Technology (Calit2), and the Center for Research in Computing and the Arts (CRCA).