

# Writing the Archive: An Experiment in Literary Self-Consciousness

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## Abstract

Since the mid-1990s theories of electronic editing have tried to establish a rationale for textual representation based on the specificity of digital processing. This rationale has been tested on a significant number of scholarly archives that have expanded our models of both genetic and critical editions. More recently, some of these projects have tried to accommodate Web 2.0 functionalities by introducing a social editing layer that allows for a certain degree of interaction with facsimiles and transcriptions. In the *LdoD Archive*—a research project that aims at remediating Fernando Pessoa's *Book of Disquiet*—we have defined a dynamic model for virtualization that includes both editorial and writing interactions. After briefly sketching our model for a virtual *LdoD*, this article focuses on the *LdoD Archive*'s writing functionalities. *The LdoD Archive* attempts to integrate text processing tools within the textual environment created by XML encoding of Pessoa's texts. This integration of editing, reading, and writing becomes an experimental simulation of literary processes that redefines the poetics of scholarly digital archiving by means of electronic literature procedures and a social media rationale.

*Keywords:* Fernando Pessoa, *Book of Disquiet*, digital archive, self-consciousness, electronic literature.

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## Radial Archive and Literary Performance

Fernando Pessoa's *Book of Disquiet* (*Livro do Desassossego*—*LdoD*<sup>1</sup>) is an unfinished book project. Pessoa wrote more than five hundred texts meant for this work between 1913 and 1935, the year of his death. The first edition of the book was published only in 1982, and another three major versions have been published since then (1990-91, 1998, 2010).<sup>2</sup> With the exception of the first version, which was reprinted once without changes after the death of its editor, the remaining three editions have continued to change, with each reprinting serving as an occasion for further editorial revisions. As it exists today, the *Book of Disquiet* may be characterized as a

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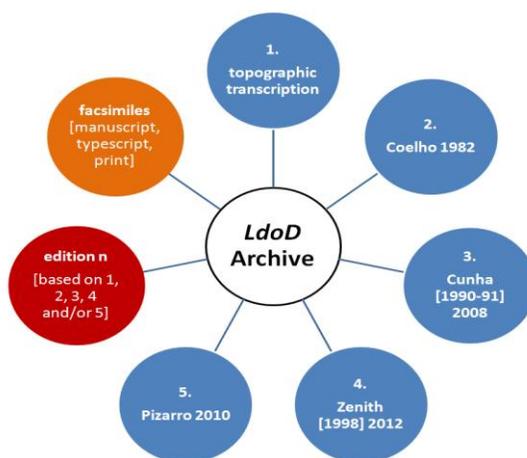
<sup>1</sup> *LdoD* is the abbreviation used by our project for referring to *Livro do Desassossego*. This abbreviated form (“L. do D.”) was often added by Fernando Pessoa (1888-1935) to fragments that he attributed to this unfinished book project. Texts for *LdoD* were first assigned by Pessoa to heteronym Vicente Guedes, but the work was later reassigned to Bernardo Soares, a persona described by Pessoa as a “semi-heteronym.” The concept of “heteronym” was developed by Pessoa himself; heteronyms are fictional authors who have a specific writing style and a unique psychology. Many of Pessoa's works have been written by a heteronym. Jacinto do Prado Coelho and Richard Zenith have assigned the *Book of Disquiet* to Bernardo Soares; Teresa Sobral Cunha has assigned the first part to Guedes and the second to Soares; Jerónimo Pizarro assigns the *Book* to Pessoa.

<sup>2</sup> This first edition, published in 1982, was edited by Coelho and transcribed by Maria Aliete Galhoz and Sobral Cunha. The second version, edited by Teresa Sobral Cunha, was published in two volumes, in 1990 and 1991. The third version, edited by Richard Zenith, appeared in 1998. The fourth version, edited by Jerónimo Pizarro, was published in 2010, in two volumes (one for the text, and the other for the critical apparatus). For a detailed editorial history of all the works by Fernando Pessoa, including the *Book of Disquiet*, see Pizarro, *La Mediación Editorial: Sobre la Vida Póstuma de lo Escrito* 29-90.

set of autograph (manuscript and typescript) fragments that at the time of Pessoa's death were still unpublished (only twelve pieces had appeared in print). Since then, these have been transcribed, selected, and organized into four major editions, each one constituting an alternative critical and genetic interpretation of the original.

In 2011, a research project to build a digital archive of the *Book of Disquiet* was approved for funding by the Portuguese national research council. The three main objectives of the research project "No Problem Has Solution: A Digital Archive of the *Book of Disquiet*"<sup>3</sup> are: (1) to represent the dynamics of the acts of writing and editing in the production of the *LdoD*; (2) to explore the potential of the digital medium to simulate the history of these dynamics; and (3) to create a space for virtualizing the *LdoD* and experimenting with the dynamics of reading, editing, and writing. Our project attempts to constellate in radial form all existing textual witnesses (digital facsimiles and editions 1 to 5, or those that will exist in the future as a result of user-created editions (edition n) (see fig. 1).

The procedural, participatory, spatial, and encyclopaedic affordances of the digital medium (Murray) are fully engaged in order to create a complex network of documentary relationships and a set of functions of dynamic interaction within this open documentary network. Our programmatic virtualization of the *Book of Disquiet* is a performative intervention in the work archive that takes place also at the level of editing and writing. Besides the genetic dimension (composition of *LdoD* by the author) and the social dimension (construction of *LdoD* by its editors), the Digital Archive of *LdoD* provides a virtual dimension (reconstruction of *LdoD* by its readers), with a set of interactive and dynamic features explicitly programmed in the model (see fig. 2).

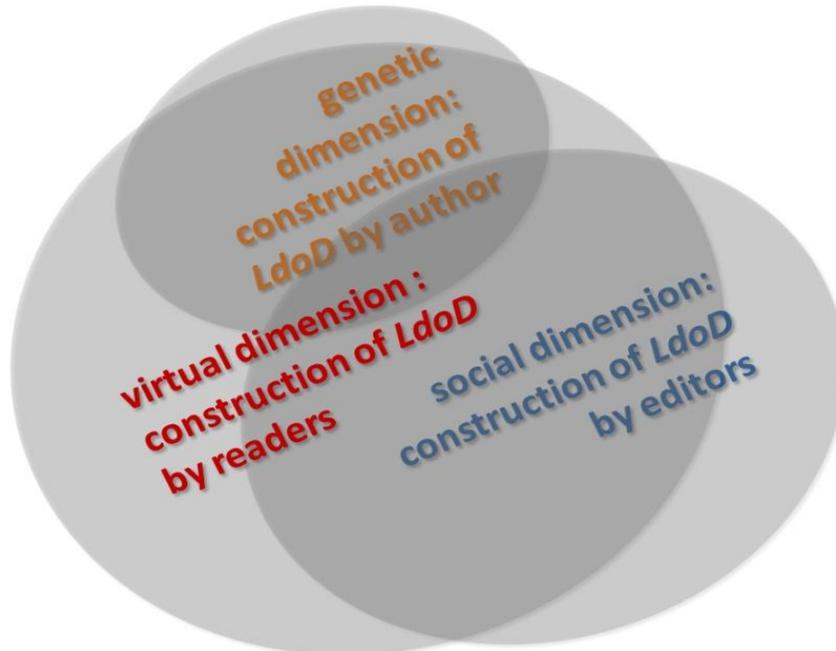


**Fig. 1.** Radial structure of the LdoD Archive. The structure of the database and its textual encoding establishes a network of relations between each and every one of the manuscript and typescript fragments so that from each one of them we can automatically reach any other as its variant. Moreover, any fragment aggregated in one of the seven possible sets (facsimile, edition 1, edition 2, edition 3, edition 4, edition 5, and edition n) can become the centre of the constellation. © Manuel Portela, 2012.

<sup>3</sup> The research project of the Centre for Portuguese Literature at the University of Coimbra with the title "No Problem Has a Solution: A Digital Archive of the *Book of Disquiet*," is funded by FCT (Foundation for Science and Technology). Reference: PTDC/CLE- LLI/118713/2010. Co-funded by FEDER (European Regional Development Fund), through Axis 1 of the Operational Competitiveness Program (POFC) of the National Strategic Framework (QREN). COMPETE: FCOMP-01-0124-FEDER-019715.

This virtual dimension is an extension of the social dimension in the collaborative environment of the web.<sup>4</sup>

Electronic encoding of textual fragments support radial configurations that respond to multiple interactions in each of those three dimensions: genetic, social, and/or virtual.

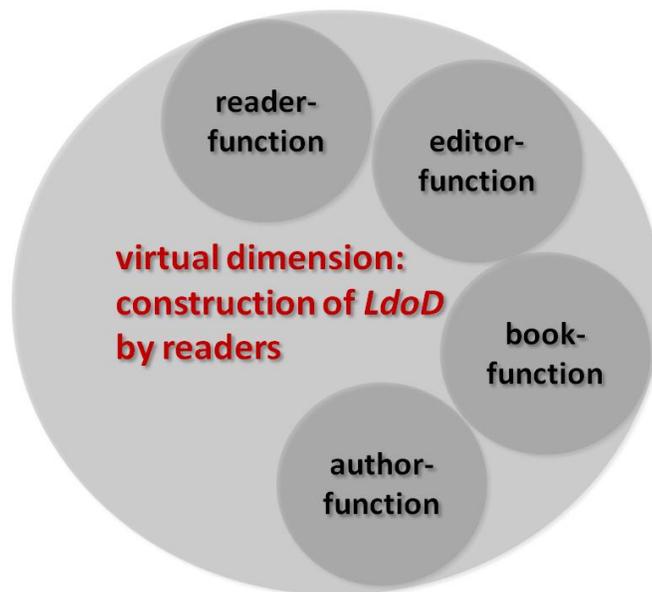


**Fig. 2.** Three dimensions of the LdoD Archive. The genetic dimension (A) supports a narrative of composition; the social dimension (B) supports a narrative of editing and reception; the virtual dimension (C) enables users to explore permutations of A and B in constructing new versions, and also the processes and mechanisms of writing and the book.  
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Our conceptual and technical integration of these three dimensions constitutes an experiment in interaction design for literary archives. Besides the usual search, retrieval, and display interactions, the dynamic functions will enable readers of the archive to perform textual interventions that change the content of the virtual dimension of the archive. These interventions can be performed according to the literary roles of editing and/or authoring, thus becoming part of the archive's simulation of the general dynamics of the literary field through its engagement of Web 2.0 tools. This model of the reconfigurative iterability of the genetic and editorial archive of the work will enable users to virtualize Pessoa's book project according to four

<sup>4</sup> In the 1990s, scholarly archives have explored the networked structures and the integration of text and image offered by hypertext and hypermedia as a new space for editorial representation, often combining critical and documentary editions in highly complex textual and metatextual environments, informed by both genetic criticism and social editing theories, as we can see in *Rossetti Archive*, *The William Blake Archive*, *Radical Scatters*, or *The Walt Whitman Archive*, for instance. More recently, scholarly archives have tried to integrate collaborative components, as is the case of, for instance, *The Shelley-Godwin Archive* and *Woolf Online*. However, the participatory affordances in these projects, generally, involve transcribing or glossing the primary sources, but not exploring their expressive potential through acts of reediting and rewriting as we are doing in the *LdoD Archive*.

functions: reader-function, editor-function, book-function, and author-function<sup>5</sup> (see fig. 3). Through interaction between textual representation and textual transformation, the *LdoD Archive* becomes an engine for the experimental simulation of literary processes (Portela. “Nenhum Problema Tem Solução”; Portela and Silva, “A Model for a Virtual LdoD”).



**Fig. 3.** Four visualization features in the LdoD Archive: reader-function, editor-function, book-function, and author-function. Users interact with the archive according to several roles. The dynamic aspects of the software are used to simulate the performativity of literary functions. © Manuel Portela, 2013.

In this article, I will focus on the author-function and explain the rationale used for virtualizing Pessoa’s writing. The Web 2.0 approach adopted for this project explores annotation and writing software, but also experimental practices and electronic literature tools in order to enable user-authors to create extensions based on Pessoa’s texts.<sup>6</sup> These texts can be published within the virtual level of the archive. While at the editor-function level, user-editors will be able to construct new editions of Pessoa’s text, at the author-function level, *LdoD* becomes both a textual database and textual instrument for the networked collaborative writing of further texts. Each *LdoD* fragment can be appropriated for new writing acts that extend the original, turning

<sup>5</sup> “Author-function” in this context contains an allusion to authorship as a discursive function (as described in Michél Foucault’s 1969 essay), but it also expresses our rationale for an understanding of textual form through the actual experience of writing. Instead of only reifying the text as a material object that we (as readers and/or editors) can only represent, the *LdoD Archive* also approaches the work through a playful engagement with the writing process itself.

<sup>6</sup> One application that we have already customized for the virtual editing layer is *Annotator*. We plan to include text analysis and visualization tools similar to those that can be found at *TAPoR 2.0*. Besides text editors, the virtual writing layer will offer e-lit tools, including text generators adapted from *RiTa*. Luis Lucas Pereira, one of the project research fellows, has developed six generative applications for mobile media (iOS and Android), called “Machines of Disquiet,” which are currently being tested.

the *LdoD Archive* into a kind of world literature experiment, to quote Joseph Tabbi's proposed definition of electronic literature as new world literary reading and writing space.<sup>7</sup>

### Handwriting and Typewriting as Script Acts

The electronic edition of modern manuscripts that are unfinished book projects can be conceived on the basis of different principles.<sup>8</sup> The principle used by the editors of the *LdoD Archive* is based on the units "trecho" (a continuous piece of finished writing) and fragment (a continuous piece of writing in progress), understood as a certain textual extension with thematic or material evidence of textual unity, which can be further marked (or not) by graphical markers: for example, a larger space or a larger number of blank lines between two handwritten textual sequences suggests an interruption; or by genetic and editorial events, for example, a piece that has been typed or published in a magazine. The units of composition included in the *LdoD Archive* are based on either the set of those four critical editions, or the topographical transcription of the digital facsimiles of authorial witnesses that correspond to that set.

On the other hand, it is possible to think of the act of writing as a speech act; that is, as a certain temporal unit of writing that does not always coincide with the documentary material unit (recto and verso of a loose leaf, or a set of contiguous pages in a notebook, for example), or with units of written discourse, such as the paragraph, or with other units of bibliographic structure, such as the chapter. The process of composition of the *Book of Disquiet* seems to result from the accretion of a few hundred of these script acts in both handwritten and typewritten form. With the exception of a small group of large texts, most script acts meant for the *Book of Disquiet*, bear witness to these temporal units of writing, as if each one constitutes the beginning of a new text (Portela and Giménez).

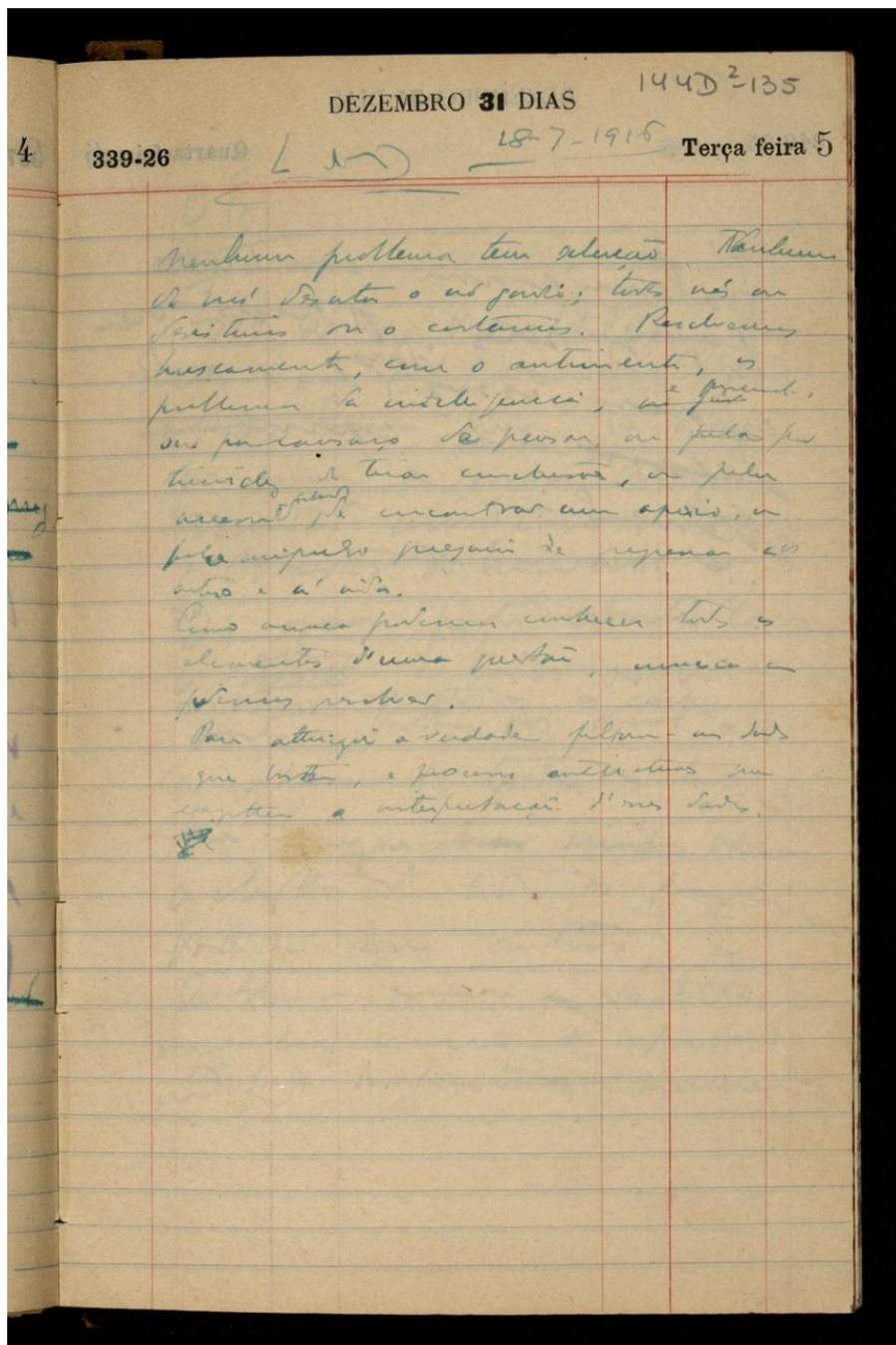
As the writing process evolves, the selection and organization of these pieces of text according to a bibliographic logic is postponed and rethought. The existence of short fragments, whose scale is slightly longer than the aphoristic scale, along with fragments of varying length (from one or several paragraphs on one page to two pages), written at very different moments in time, suggests precisely this non-coincidence between the temporal unit of writing and the cumulative and retrospective process of accretion and rewriting that contributes to the semantic and stylistic coherence at the scale of the book. Edward Vanhoutte characterizes the modern manuscript as a complex network of those temporal units of writing. Marta L. Werner, in her turn, describes the modern manuscript as a record of the dynamics of text in the process of creating itself. She places it in a liminal space of private inscription, which becomes physically reflected in its undisciplined textual condition. In the case of the *Book of Disquiet*, this

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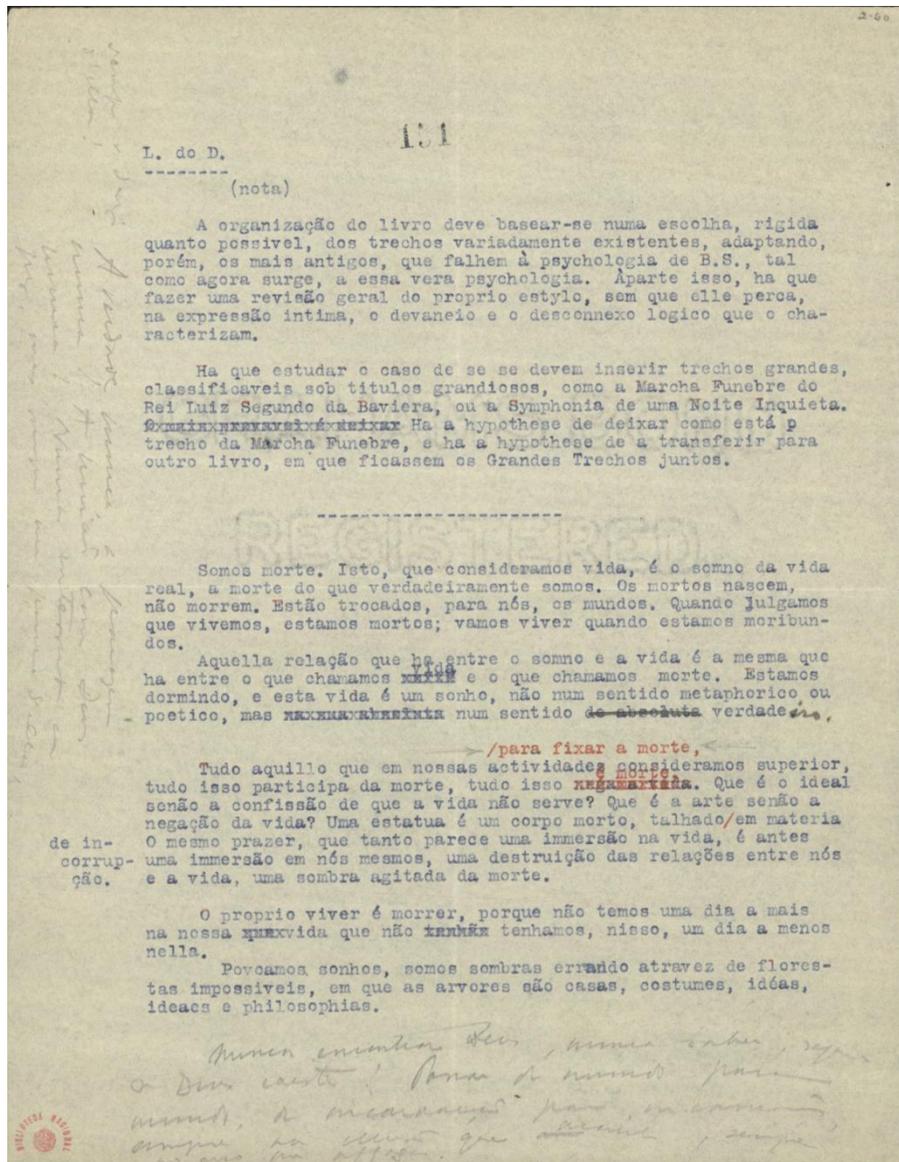
<sup>7</sup> Analyzing the "relocation of the literary in multiple media" (28), Joseph Tabbi discusses the technological and social basis for world literature, highlighting the value of Oulipian literary practices for an understanding of the specific constraints of electronic literature in our networked environment.

<sup>8</sup> Two examples of critical genetic electronic editions are *Robert Musil: Kommentierte Edition Samtlicher Werke, Briefe und Nachgelassener Schriften. Mit Transkriptionen und Faksimiles Aller Handschriften*, and the ongoing edition of Samuel Beckett's manuscripts: *Samuel Beckett Digital Manuscript Project* (2011 -).

undisciplined textual condition is evident in hundreds of typescript or handwritten documents (see fig. 4 and 5).



**Fig. 4.** Autograph manuscript containing a piece for the Book of Disquiet, included in notebook 144D<sup>2</sup> – “L. do D. 18-7-1916 Nenhum problema tem solução.” BN reference for the digital facsimile: bn-ACPC-and-e3J44d2\_0351J35rj24-C-R0150. © National Library of Portugal. Printed with permission.



**Fig. 5.** Autograph typescript containing two texts: a typescript note about a possible organization for the Book of Disquiet – “L. do D. (nota)”; and the typescript piece beginning “Somos morte,” which also contains two additional handwritten paragraphs (bottom and left-hand margin). BN reference for the digital facsimile: bn-acpc-e-e3-2-1-91\_0119\_60\_t24-C-R0150. © National Library of Portugal. Printed with permission.

By using the notion of “trecho” (piece) to refer to the units of composition of *LdoD*, Pessoa seems to be aware of this dimension of aggregation and sequencing of textual pieces as being one of the main compositional principles of *LdoD*. The revision process that he envisions, with regard to the bibliographic production of his work, seems to imply the simultaneous production of psychological coherence and stylistic consistency:

## B. of D. (Note)

The organization of the book should be based on a highly rigorous selection from among the various kinds of texts written, adapting the older ones—which lack the psychology of Bernardo Soares—to that true psychology as it has now emerged. In addition, an overall revision of the style needs to be made, but without giving up the dreaminess and logical disjointedness of its intimate expression.

It must also be decided whether to include the large texts with grandiose titles, such as the “Funeral March for Ludwig II, King of Bavaria” or “Symphony of the Restless Night.” The “Funeral March” could be left as it is, or it could be made part of another book, one that would gather together all the Large Texts. (Pessoa, *Book of Disquiet*, Appendix III)

Fernando Pessoa considers submitting the fragments of *LdoD* to the conceptual and material coherence of the book form. He is recognizing both the disjointed dreamlike introspective style of Bernardo Soares, and also the textual affinity that exists between large texts. Bibliographic coherence seems to depend, simultaneously, on two separate rationales: an external logic of organization that sequences and articulates its elements according to the syntactic structure and the horizon of codex totalization that creates unity through its discrete and finite character; and an internal logic of organization that selects and associates fragments because of semantic and stylistic affinities that produce bibliographic unity through the cumulative effect of discursive coherence between brief and lengthy passages. The difficulty in matching the material and discursive space of writing to the material and conceptual space of the book results in a process of incompleteness and deferment and in the non-conformation between writing space and book space.

Thus Pessoa’s heteronymic split is not only the result of a retroactive effect of subjectivity produced by a given writing mode. It results also from the non-coincidence between the order of writing and the order of the book, which unfolds in an authorial self-consciousness as a product of the rules of writing and in an authorial self-consciousness as a product of the rules of the book. The name and psychology of “Bernardo Soares” manifests itself in a given style as a potential book author, an author who is coproduced retroactively by the book he wants to produce, and not only by the psychography of his writing style. The implication is that the writing rules that define him as a heteronymic author (another author) also serve as a device for the production of bibliographic coherence, through which the heteronym edits himself as an author, also determining the texts that are part of his book in progress. It is through this joint production of writing and codex that the subject of writing produces itself as the book author as well.

## Reading the Self, Writing the Self

The intensity of my sensations has always been less than the intensity of my awareness of them. I've always suffered more from my consciousness that I was suffering than from the suffering of which I was conscious.

The life of my emotions moved early on to the chambers of thought, and that's where I've most fully lived my emotional experience of life.

And since thought, when it shelters emotion, is more demanding than emotion by itself, the regime of consciousness in which I began to live what I felt made how I felt more down-to-earth, more physical, more titillating. (Pessoa, *Livro do Desasocego*, frag. 93)

In *O Livro da Consciência* ["The Book of Consciousness"]—whose English title is *Self Comes to Mind*—António Damásio refers to the solution he has come up with for the Portuguese title of his work as a tribute to Fernando Pessoa (419). One of Damásio's opening epigraphs is taken from the *Book of Disquiet* and suggests a possible link between Bernardo Soares's self-reflexive and self-conscious introspection and current knowledge about the complexity of the cerebral integration of the areas responsible for mapping the body and generating a sense of self: "My soul is a secret orchestra, but I don't know what instruments—strings, harps, cymbals, drums—strum and bang inside me. I only know myself as the symphony" (Pessoa, *Book of Disquiet*, frag. 310). This emergence of a sense of self as part of processes of consciousness may be said to be at the centre of Pessoa's heteronymic and fragmentary writing.

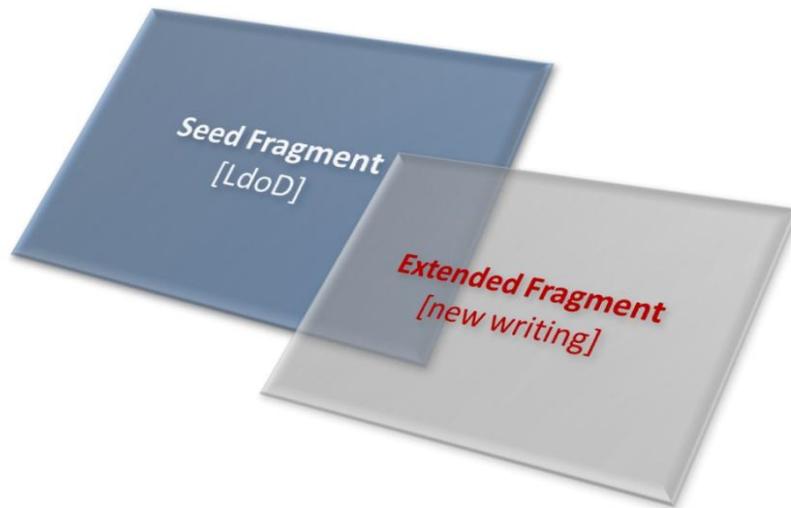
His invention of writing selves is a product of his ability to sustain self-conscious feedback loops between his thought and emotional processes on the one hand, and the material and verbal processes of writing on the other. This self-reflexive writing activity produces a sort of extended mind as if writing, functioning as an external organ of the body, participates in the neurological pulses of a conscious mind. Writing becomes a process for repeatedly invoking and constructing the self as a particular moment in the emergence of this consciousness of being conscious. The technology and practice of writing could be described as part of what Damásio refers to as sociocultural homeostasis, resulting from the interaction with the biological homeostatic impulse that favors the development of a conscious mind and the integration of neural patterns that produces a sense of self (356-63). The fact that the *Book of Disquiet* can be read, in the age of functional magnetic resonance imaging, as a book of consciousness that engages with theories of mind-brain equivalence in contemporary neuroscience, is also revealing about its continuing relevance as an inquiry into the possibilities of self-knowledge of the human mind.

Many pieces and fragments from the *Book of Disquiet* are in fact reflexive about self, consciousness, and writing. This reflexivity of the writing self is at the core of Pessoa's poetic experiments with subjectivity. His early invention of writing selves emerges from this reflexivity and constitutes the major literary effect of his understanding of language as producer of a subjectivity, not just as the recording of a series of possible subject-positions, affective states and points of view on the world, but as the fundamental neurological process of consciousness serving as a metacognitive awareness of being aware. The act of writing the self intensifies the neurological pathways of consciousness, meaning the feedback circuit between thinking and

writing, creating as a result a self being conscious. The possibilities of being in the world are explored through the weavings of perception, memory, and imagination that make the emergence of consciousness possible. The *Book of Disquiet* teems with verbal images replete with felt, remembered or imagined sensations, and with recursive structures that intensify these processes of consciousness, as if language and writing serve as an extended bodily and neurological organ for experiencing self-consciousness: “I sometimes enjoy (in split fashion) thinking about the possibility of a future geography of our self-awareness. I believe that the future historian of his own sensations may be able to make a precise science out of the attitude he takes towards his self-awareness” (Pessoa, *Livro do Desassossego*, frag. 76). Our understanding of the *Book of Disquiet* as an extended experiment with the self writing the self—as both record and invention of subjectivity, and as record and invention of consciousness—is one of the reasons for the *LdoD Archive*’s poetic rationale for opening up Pessoa’s acts of writing to further reflexive processes. Taking the role of writers, readers are able to intervene in the actual textual field of the book and write their own variations based on Pessoa’s pieces. Reading interventions and writing interventions are placed in a feedback circuit that simulates through material interventions the processes of self-conscious writing. Using available Web 2.0 tools, supplemented by dedicated software, the virtual dimension of the *LdoD Archive* socializes the work at the level of editing, enabling users to reedit the book, and also at the level of writing, providing tools for rewriting the book.

### **Writing (in) the Archive**

The main goal of the author-function is the extension of *LdoD* with new texts based on original fragments from *LdoD*. The readers of the *LdoD Archive* are able to write and publish new texts based on fragments from *LdoD*, a process that turns them into authors. Central to the author-function is the functionality that provides capabilities for writing and publishing the new fragments. These capabilities range from using sentences or phrases from *LdoD* as a starting point for freely written texts to the possibility of modifying sentences and phrases from *LdoD*, or even to permutations and text generation based on the syntactic structure and lexicon of the work. To be considered a textual extension or variation or generation, references to the sentences and sequences of words of the original fragment (which we call seed-fragment in the context of the author-function) must be maintained (see fig. 6).



**Fig. 6.** *LdoD* fragments become seed fragments for new acts of writing that result in extended fragments. Tools for textual production include text editors, textual analysis tools, and text generators of different types. The interaction design model for the *LdoD Archive* embeds the *Book of Disquiet* into the collaborative dynamics of Web 2.0 as a reading and writing space.

References establish a network of links among Pessoa's original fragments and those produced by users of the *Archive*. As the material basis for new writing acts, seed fragments give user-writers an explicit awareness of the iterability of writing through the anchors and networked cross-references between them and their extended fragments. The iterative processes of rereading and rewriting become in-built elements in the participatory logic of the archive. Self-conscious writing can be experienced as an ongoing and open process of writing the self, and as a way of experimenting with the consciousness of writing as a particular mode of emergence of consciousness and self through acts of writing. This ability to read and reread the self, writing itself into consciousness, is one of the sources of Pessoa's understanding of writing as self-creation:

The entire life of the human soul is mere motions in the shadows. We live in a twilight of consciousness, never in accord with whom we are or think we are. Everyone harbours some kind of vanity, and there's an error whose degree we can't determine. We're something that goes on during the show's intermission; sometimes, through certain doors, we catch a glimpse of what may be no more than scenery. The world is one big confusion, like voices in the night.

I've just reread these pages on which I write with a lucidity that endures only in them, and I ask myself: What is this, and what good is it? Who am I when I feel? What in me dies when I am?

Like someone on a hill who tries to make out the people in the valley, I look down at myself from on high, and I'm a hazy and confused landscape, along with everything else.  
(Pessoa, *Book of Disquiet*, frag. 93)

In this passage, the process of existing in the world is tainted by the ungraspable nature of self-awareness and by the impossibility of experiencing both world and self outside the fragmentary glimpses that constitute one's sense of self. As the fleeting nature of self is captured through script acts, self-awareness becomes a process of reading the writing self, as if the self were a writing-reading-writing process, conceived for exploring self-awareness through the recursive and reflexive structure of language. Pessoa is imagining the scene of writing as a landscape for observing one's process of self production. Reading the self writing could be described as one particular instance of what Fernando Rodríguez de la Flor and Daniel Escandell Montiel have called "lecto-escritura," meaning the integrated operation of reading and writing acts (22). In this case, however, the dynamic reciprocity of reading and writing is fed with one's own writing as the tangible presence of an evanescent and polymorphic sense of self.

Any fragment could provide a source for a new act of writing. Take, for example, the following text:

I was already feeling uneasy. Without warning the silence had stopped breathing.

Suddenly, the light of all hells cracked like steel. I crouched like an animal against the top of the desk, my hands lying flat like useless paws. A soulless light had swept through all nooks and souls, and the sound of a nearby mountain tumbled down from on high, rending the hard veil of the abyss with a boom. My heart stopped. My throat gulped. My consciousness saw only a blot of ink on a sheet of paper. (Pessoa, *Book of Disquiet*, frag. 355)

Fear caused by thunder and lightning is expressed through powerful images of the thunderstorm and its physiological effects on the body. The self is suddenly turned into a frightened animal hanging on to his desk, the signs of writing morphed into a "blot of ink on a sheet of paper," and consciousness is reduced to a mere visual perception of an object. Acts of writing would place specific anchors on these sentences or parts of them while exploring this visceral fear of thunder on the self and on the scene of writing.

The extension of fragments should be done in the context of a virtual edition in which Pessoa's textual witnesses are socialized at the level of writing processes by the users of the archive. After the extension, the extended fragment becomes part of a virtual edition and it will eventually become part of other virtual editions through the functionality provided by the book-function. The programming of the author-function in the virtual model assumes that writing can be experienced in its internal processes as a device for the production of consciousness and subjectivity. The technical implementation of this concept implies socializing the writing of *LdoD*, and expanding the ludic component contained in our model for a digital virtualization of *LdoD*.

The set of functionalities for extending fragments include: (1) copying a fragment for expansion and modification—by removing or replacing or adding one or more sentences and/or words; and (2) creating a new fragment and selecting a set of seed-fragments—by copying sentences and/or words from seed-fragments and by associating sentences and/or words of the extended-fragment to the seed-fragments. The two sets of functionalities described above may

be used in conjunction. Note that the archive only enables the creation of extensions of fragments from *LdoD*, and does not support extensions of already extended fragments, that is, any new fragment must reference at least one word existing in any of the fragments of *LdoD*.

References establish the link between seed-fragment and extended-fragment, and they are user-added markers of intertextual relations between fragments written by Pessoa and fragments written by readers of his fragments (fig. 7). We are still in the process of deciding the adequate level of granularity of the cross-reference between seed-fragment and its extended user-created variation. Although we anticipate that a group of words or a single sentence, containing powerful poetic images, will provide the most frequent chosen anchors in Pessoa's text, it is also worth considering the possibility of establishing the single word as the shortest reference element. The link to the specific quote site in the seed-fragment will always give readers access to the adjacent co-textual elements, although certain words invented by Pessoa in the *Book of Disquiet* may be said to contain their own self-sufficient poetic and imaginative echoes.



**Fig. 7.** Cross-references between extended fragment and seed fragment establish an intertextual layer of inscriptions that captures users' appropriations and transformations of Pessoa's text. Users of the *LdoD Archive* will engage with Pessoa's writing process on two different levels: the genetic level, where they can observe the material and verbal composition of *LdoD*; and the virtual level, where they can experiment with the act of writing based on passages from the *LdoD*.

By default, any extended fragment must contain at least one reference to a textual passage from the *Book of Disquiet*. If the reference is to the entire fragment, then its title or its incipit will be the textual anchors. Writing operations can also be anchored on more than one seed-fragment. The search engine of the *LdoD Archive* and its tool for assisted creation of taxonomies will allow users to look for similar passages across the entire corpus of fragments, and select them for their writing experiments.

Since the author-function is highly exploratory and experimental, and we intend to implement different techniques for extending fragments, during and after the current project design, the interface supporting this function is dependent on, and will vary according to the technique in question. Still, generally speaking, there should be interfaces for selecting fragments intended for use in extensions, a text editor for the extension that retains and/or lets the user add references to the seed-fragment(s) and different types of text generators. The

writing of the extension in the text editor is contextualized by the selected fragments, and this text editor must support ways to access those fragments and choose parts of them. The interface will also provide access to textual tools used in electronic literature.

The virtual writing functions should satisfy the following conditions: (1) the possibility of selecting sources, such as selecting between transcriptions according to a particular edition contained in the archive; (2) the possibility of defining seed elements at different levels of granularity, from single word to phrase to sentence to entire fragment; (3) the possibility of defining various degrees of human-machine collaboration, from blog-like pieces of human-authored text to entirely computer-authored permutation and generation; (4) the possibility of defining anchors and links—between seed-fragment(s) and extended fragment, and also among extended fragments; (5) the possibility of defining order-specific numbering that sequences extended fragments; adopting the pre-defined ordering of the seed fragments in specific editions; variable order dependent on the internal links that cross-reference extended fragments; variable order dependent on internal links that cross-reference extended and seed fragments; and also a randomized order; (6) the possibility of defining heteronym attribution by selecting between the two original heteronyms (Vicente Guedes and Bernardo Soares) or by creating a new heteronym.

Actual writing operations in the Archive should be able to select from the following pool of tools according to each user's specific intentions: (1) a text editor, similar to those used in blogs; (2) a text generator, with programmed structures and behaviors that allow for user-defined parameters for combination, permutation, and generation, for instance, of algorithmic textual transformations, according to Oulipian procedures; and (3) tools for textual analysis that enable readers to find, sort, and extract data from *LdoD* fragments according to specific modes of analysis, such as lexicometry, stylometry, topic modelling, textual concordances, among others. Verbal and literary knowledge produced by such textual analyses can, in turn, be used as an aid to writing with a text editor or with a text generator. A further possibility would be (4) the use of image editors (either independent or as a series of functions integrated into the text editors), for enabling users to make collages or other types of manipulations based on the authorial digital facsimiles, or even a combination of image and textual collage.

The use of electronic literature tools within the writing component of the Archive will follow different strategies for textual generation. Nick Montfort's ppg256 (Perl poetry generator in 256 characters), a small text generator, applies a writing-under-constraint practice to the act of programming by setting Perl language and 256 characters of code as the constraints for the generator. Montfort specifically uses part of the code to produce graphic markers of poetic texts (such as titles and blank lines to mark stanza-breaks) in order to activate certain reading expectations about poetry ("XS, S, M, L: Creative Text Generators of Different Scales" 3), although the way the generator produces combinations of letters or combinations of words could be more or less close to dictionary words and grammatical structures ("The Two [JavaScript version of a Python program]"). Other writers have approached text generation with other types of constraints and rules. Jean-Pierre Balpe, for instance, in his online article "Modèles en Génération Automatique de Textes," defines knowledge representations and explicit rules of

natural language grammars for the dictionarized items in ways that will guarantee grammatical and lexical cohesion.<sup>9</sup> Rui Torres in his *Poemário* [motor textual] (2009), also mentioned in his online book review ““The dead must be killed once again”: Plagiotropia as Critical Literary Practice,” uses a predefined textual matrix (phrase, sentence, poem), often taken from the corpus of another writer’s work, and programs lexical permutations based on lists of words that result in grammatical structures. Since these lexical lists are, generally, extracted from a corpus of texts by the same author, the resulting texts can be remarkably similar to the authorial archive of existing texts (Portela, “Autoauthor, Autotext, Autoreader”).<sup>10</sup> Daniel Howe’s software toolkit for generative literature offers further options for natural language experiments. In particular, it provides users the ability to work natively in the web-browser.

In the case of Pessoa, textual generation could be fed, for instance, with lexical items either from the *LdoD* itself, or from the vocabularies of his major heteronyms. This would show us how heteronimic identity is also a function of particular language uses and their corresponding affective states of mind, structures of feeling, and patterns of thought. Given the richness, diversity, and originality of thoughts and uses of language in the *LdoD*, there are thousands of sentences that could be harvested as seeds for new imaginings and further acts of writing of different kinds. Thus the author-function in the archive will take place in a spectrum of writing practices that includes both human-authored and machine-assisted textual production. The processes of writing represented through the genetic encoding of the Pessoa’s writing would be cracked open for new reading-writing feedbacks.

### **Final Thoughts: A Conceptual, Material, and Technical Experiment**

The *LdoD Archive* may, ultimately, be described as a conceptual, material, and technical experiment that attempts to simulate literary functions and self-conscious processes. Electronic remediation of Pessoa’s text is being imagined not only as a meta-editorial exercise that will allow users to play with and investigate the relations between the genetic and social dynamics of textual production, but also as a way of engaging the writing process itself in its linguistic and inscriptional dimensions. The problem of editing and organizing a book about the inner existence of a written self becomes a material experiment with the potentiality of writing that takes advantage of the procedural and collaborative affordances of the medium.

Virtualizing Pessoa’s writing in a dynamic archive is our way of reimagining the literary performance for the current environment of networked writing and reading spaces. This implies

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<sup>9</sup> Jean-Pierre Balpe calls this explicit representation a “graph of knowledge” [“*graph de connaissance*”] (“Modèles en génération automatique de texts”). The output of his textual generator results from an open and recursive generation of texts, in which the programmer is able to define syntactic structures, grammar rules associated with each dictionary entry, and also graphs of knowledge that connect items according to particular semantic and lexical fields. Balpe distinguishes his open-ended textual generation from other combinatoric closed systems of permutation.

<sup>10</sup> In Rui Torres’s generative and permutational poetics, textual engines operate simultaneously as reading and writing devices. Linguistic structures and semantic fields in the *Book of Disquiet* can be explored with similar textual programs. In fact, the “Machines of Disquiet” (Pereira) are already exploring the work’s textual database at different scales, including substitutions and juxtapositions at the level of sentence, word, and letter.

reimagining the dynamics between editing and the codex, and between reading and writing in ways that fully engage the possibilities and constraints of the digital medium, including its diverse layers of encoding, programmability, visualization, and interaction. All of this is, of course, easier said than done.<sup>11</sup> Hence the strategic beauty of Pessoa's phrase that I have chosen for the title of our project:

No problem has a solution. None of us can untie the Gordian knot; either we give up or we cut it. We brusquely resolve intellectual problems with our feelings, either because we're tired of thinking, or because we're afraid to draw conclusions, or because of an inexplicable need to latch on to something, or because of a gregarious impulse to return to other people and to life.

Since we can never know all the factors that a problem entails, we can never solve it.

To arrive at the truth we would need more data, along with the intellectual resources for exhaustively interpreting the data. (Pessoa, *Book of Disquiet*, frag. 333)

Writing the Archive may well be a failed solution to an imaginary problem. On the other hand, our research suggests that the *Book of Disquiet* is the ideal work for an attempt at reimagining the textual condition in ways that fully explore the computer as an expressive medium. To engage reading, editing, and writing—inside and outside bibliographic structures—through performative simulations is our material exploration of the medium's processing and participatory affordances for literary potentiality.

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<sup>11</sup> At the end of the first stage of the project (2012-2015), only the dynamic editing functions will be available. The *LdoD Archive* will be published on the web in October 2015 at *Ldod.uc.pt*. The dynamic writing functions within the archive are still under development and they will be available only after a second stage of implementation (2016-2018).

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