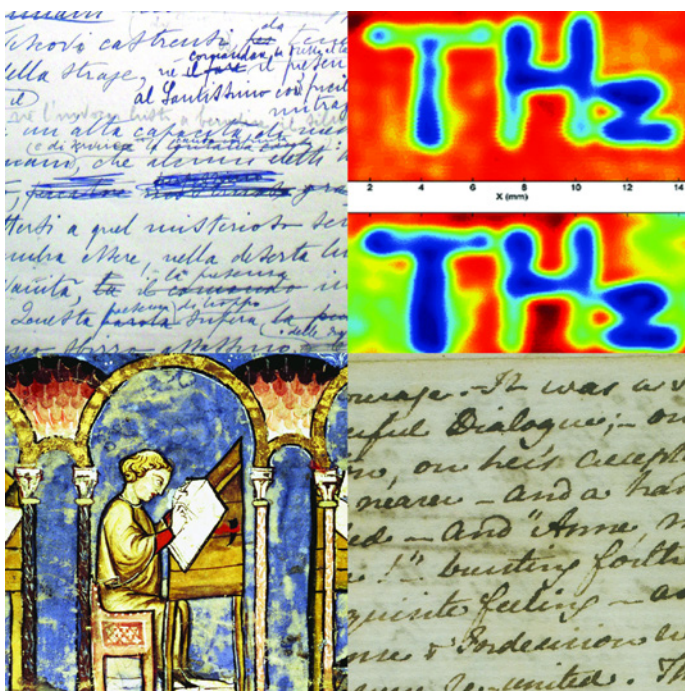


Edizioni Critiche Digitali Digital Critical Editions

Edizioni a confronto Comparing Editions

a cura di

Paola Italia e Claudia Bonsi



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In copertina: elaborazione grafica a cura di Maria Villano. In alto a sinistra: particolare della p. 309 del manoscritto di *Eros e Priapo* di Carlo Emilio Gadda, per gentile concessione degli eredi. In basso a destra: Jane Austen's *Pride and Prejudice*, p. 1, c. 10 © The British Library Board.

2. Fernando Pessoa's *Book of Disquiet* as a Dynamic Digital Archive

Manuel Portela, António Rito Silva

LdoD Archive is a dynamic digital archive based on Fernando Pessoa's *Livro do Desassossego* ["L. do D."] <http://ldod.uc.pt>. The Archive contains facsimiles and textual transcriptions of autograph witnesses (manuscripts, typescripts, printed texts) as well as textual transcriptions of four editions of the *Book of Disquiet* published between 1982 and 2012. All variations across the textual *corpus* have been marked up in TEI-conformant XML. This granular encoding has enabled us to automate comparisons between any 2, 3, 4 or 5 versions of any given fragment, both at the micro-scale of textual form, and at the macro-scale of bibliographic structure. Besides the set of functionalities related to the scholarly level of the archive, the *LdoD Archive* provides a set of software tools that allow readers to generate further content by creating their own editions and annotations within the archive's virtual layer, and by writing their own variations based on specific passages. The research for this project culminated in a dynamic model for a digital archive, which brings collaborative computing techniques into the universe of critical editing and reading in digital media. This article discusses the conceptual and technical virtualization of the *Book of Disquiet* as a digital simulation of the dynamic nature of textual fields, and presents the project's workflow from expert encoding to end-user interaction.

2.1. From Textual Marks to Textual Fields: A Dynamic and Socialized Archive

Generally speaking, critical digital editions follow remediation processes that correspond to a medial transfer centered on a mimetic

relationship with the original documents, including digital reconstruction of their handwritten, typescript, or printed modularity. Thus, the reconstitution of the autograph archive and its editions follows a representational principle, whose aim is to authenticate its own authority as both facsimile image and textual transcription of the document, supplemented by a comprehensive critical apparatus that explains autographic inscriptions and their editorial transformations. The interpretative nature of the editorial act is minimized, through a transparency effect obtained by the facsimile presence of the object, through exhaustive description in metadata and notes, and also through textual encoding for automatic processing. This principle of representational completeness manifests itself in the content and structure of the different modules of the Text Encoding Initiative, whose hierarchical tagging system contains extremely granular descriptions of a huge amount of textual forms and events.

Although deeply aware of the remedial specificity of digital media, research carried out in the field of digital critical editing has focused on the transfer and expansion of the critical edition model into digital space and has been less concerned with the reconceptualization of the relationship between document and transcript, or between text and critical apparatus [SHILLINGSBURG 2006 and 2009; ROLAND 2011; KIRSCHENBAUM 2013; ROBINSON 2013; APOLLON *et al.* 2014; PIERAZZO 2015]. The strong mimetic power of digital visual representation has limited the experimentation with other possibilities for modeling textual objects. In our view, both intentionalist editing models, and social editing models, remain dominated by a representational descriptive logic and a comprehensive emulation of the document. The possibility of facsimile representation of the original in high-resolution and the consequent mapping of textual marks by means of topographical transcriptions – made according to a granular system of spatial coordinates – testifies to this fetishism and monumentalization of the object. The principle of exhaustiveness in description contains an ingrained desire for transparency and coincidence between transcription and inscription, as if transcription or facsimile representation could evade the process of abstraction and modeling of its textual object [ROLAND 2011].

Three recent digital editions in which the mimetic logic in the representation of marks is expressed through a spatial mapping of writing marks according to a topographic coordinate system are *Samuel Beckett Digital Manuscript Project* (2011-2016), the prototype for Mar-

cel Proust's *Cahier 46* (2013) and *Woolf Online* (2011-2016).¹ In 2011, an encoding model for genetic editions was integrated into the TEI guidelines, introducing new sets of tags for topographic encoding of documents (e.g. <surface> and <zone>) which encouraged editors to intensify this emulation component in their transcripts.² The justification for the TEI encoding prototype of Proust's *Cahier 46* (which uses the new spatial tags to rehearse a timeline of composition) underlines the gain in representing the dynamics of writing as a gain of mimetic fidelity:

Les éditions ultra-diplomatiques en ligne sont en général présentées en vis-à-vis du fac-similé du manuscrit, mais cette représentation n'est pas satisfaisante, et cela pour plusieurs raisons: tout d'abord, l'imitation n'est jamais parfaite; ensuite, c'est à l'utilisateur/lecteur de faire la mise en relation de la transcription avec le document; enfin, à cause des contraintes spatiales de l'écran, on doit se contenter de présenter une page à la fois, et non, par exemple, une double page – ce qui, dans le cas des cahiers de Proust, trahit la réalité du manuscrit, puisque la double page est, chez Proust, l'espace de l'écriture. [ANDRÉ-PIERAZZO 2013, p. 155]

Although aware of the necessary distortions of digital remediation – such as treating the single page as the unit of transcription instead of the double spread or leaving the mapping between transcript and image in the hands of readers –, the rationale for a topographic transcription is presented in terms of the imperfection of the imitation.

If, in the cases of Beckett and Proust, topographic encoding of textual marks serves a principle of genetic analysis of the sequence of inscriptional acts, translating spatiality into temporality, in the case of the Virginia Woolf's *To the Lighthouse*, the topographic transcription of the typescript results in a strange combination of redundancy and transparency, suggesting the coincidence between inscription and transcription, while exhibiting, at the same time, the ontological un-coincidence between object and model of the object [Fig. 2.1.].

Although enriched with the possibility of separating or overlapping the display of layers of visualization and transcription inherent

¹ VAN HULLE-NIXON 2011-2016, <http://www.beckettarchive.org/>; PIERAZZO-ANDRÉ 2013, http://research.cch.kcl.ac.uk/proust_prototype/; and CAUGHIE *et al.* 2011-2016, <http://www.woolfonline.com>.

² <http://www.tei-c.org/Activities/Council/Working/tcw19.html>

to the photo-electronic materiality of the digital medium, those three digital critical genetic editions can be described as remediations of the ultra-diplomatic edition that expand its mimetic rationale by overlaying text and image. This means that the bitmapping of the latter and the character codes of the former are subordinated to a representational logic of literal correspondence between machine-readable representation and physical object.

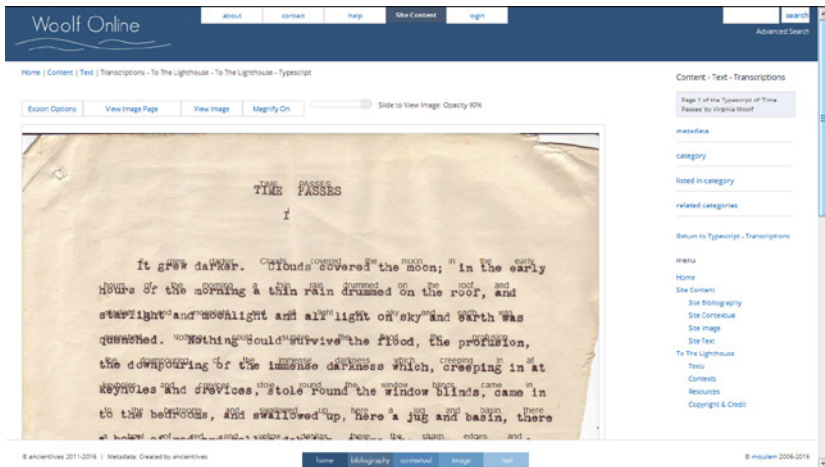


Fig. 2.1. Woolf Online: mapping encoded transcription onto a digital image facsimile of Virginia Woolf's typescript.

The *LdoD Archive* was originally conceived as a way of representing the editorial history of the *Book of Disquiet*, and placing that editorial history in the context of the autograph witnesses so that readers could see the interventions of the critical editors and relate them to their specific ideas about the work. Gradually, our model for virtualizing Pessoa's writings and his editors' books shifted its focus from an extremely detailed textual encoding – concerned with marking up the genetic and editorial marks in our sources – to theoretical considerations about virtualizing the set of functions embedded in the processes of producing a work as work. Thus our data model of the *LdoD Archive*, which had established the textual fragment as the basic unit for processing and presentation, expanded to include Web 2.0 interactions that would enable users to change the content of the archive and perform actions on the text according to specific roles. The TEI modeling of the documents as a hierarchical processable representation of textu-

al marks was complemented with a theoretical and processing model whose aim was to simulate the dynamics of the textual field itself.

2.2. From Representation to Simulation: Beyond the Bibliographical Horizon

Although the *LdoD Archive*, at certain level, also contains a representational logic similar to those that now constitute the technical standards and theoretical principles in the field of critical digital editions, we may say that it corresponds to a different model of remediation, i.e., a model that uses the processability of the digital medium for reconceptualizing and reconfiguring modes textual presentation and representation, as well as modes of interaction with these textual reconfigurations. It is this dynamic reconceptualization of text and reader's interaction with text that lets us add a simulatory function to the representational function. Its goal is to create a dynamic archive that shows the relations and transactions between the archival, the editorial and the authorial [PORTELA - SILVA 2015a]. Textual variability is not only presented as a record of variations that are historically attested in the writing process and in the editorial process. It is also experimentally produced as a consequence of the virtualization of the *Book of Disquiet* at the levels of editing and writing [PORTELA - SILVA 2014]. Through the development of an infrastructure and a set of programming principles that allow users to modify both the text and the organization of the text, the *LdoD Archive* opens up a set of possibilities for intervention and manipulation that exceeds a representational logic, thus virtualizing the book as a potentiality. The processuality of the book as conceptual and material horizon of writing and editing can be seen as a remediation of the past archive and can be experienced as the future production of the archive [PORTELA-SILVA 2015b].

The *LdoD Archive* thus represents a radial and simulatory modeling of the procedural nature of textuality, similar to what has been imagined by Jerome McGann:

But suppose, in our real-life engagements with those physical objects, we experience them as social objects, as functions of measurements that their users and makers have chosen for certain particular purposes. In such a case you will not want to build a model of one made thing, you will try to design a system that can simulate all the realized and realizable documen-

tary possibilities – the possibilities that are known and recorded as well as those that have yet to be (re)constructed. [McGANN 2006, p. 60]

Instead of hypostatizing and monumentalizing the objective nature of the material instantiation of text (its textual marks), the technical and conceptual model of the *LdoD Archive* is focused on the processuality through which the text is produced as “literary” (its textual field). Literary practices can be modeled upon the actions that produce a text as a literary object, that is, as an object that meets a certain set of rules of production and perception. Produced as a literary object, it is also perceived as a literary object, and it is through this double production that its literary condition emerges. Its literary condition is intentionally produced by an act of writing and is retroactively produced by the inscription of a reading act in the field of intentions and meanings of this writing act. Among the actions that mark an object or an event as literary, we can highlight the actions of writing, editing and reading. Literary performativity consists of performing the set of roles associated with those actions. The separation and division of roles – which originates in the functional differences between writing, editing and reading – resulted in the historical development of specific figures and institutions: the institution of the author as the original creator; the editor as an expert in the form and transmission of the text; and the reader as an interpreter and commentator open to the ambiguity of signs.

Furthermore, the material and conceptual instantiation of the work in the form of a book is the space where those actions converge. The book can also be postulated as an actor since it constitutes itself as conceptual, material and discursive space where that particular network of actions and roles are constellated and mutually determining. We can thus postulate a *book-function* as another structuring aspect of literary performativity. Writers write with a certain idea of the book as the horizon of their creative process, assuming the *author-function* within the discursive fields of language and culture; editors, in turn, are involved in the bibliographic materialization of the text, that is, in giving it a textual and material form capable of reproduction and circulation; readers act on the book by performing the set of manipulative and interpretative operations that the body of signs of the book-text and the discursive fields of language and culture provide them.

Those four actions can be conceived as discursive functions or roles whose performance constitutes the literary field. Instead of essential-

izing the conditions of production through the institutional and technical modes that define the roles that I can play, what we propose in *LdoD Archive* is to use the technical flexibility of the digital medium to break the rigidity of the print medium performance. Thus, the *Book of Disquiet* can be re-imagined as a literary space for exploring and understanding the nature and conditions of literary performance. By occupying different positions in this variable space, and experimenting with features that allow them to write, edit and read, the interactors can observe literary performativity itself as a set of actions that produce a given work and its conditions of existence and interpretability for a given subject.

By its material and conceptual nature, the *Book of Disquiet* appears as the ideal object for an experiment like this. Through its thematizing of self-awareness and its use of writing to intensify the processes of consciousness, showing them as writing in process – from fragmentary and preliminary annotations to clean typescript –, the *Book of Disquiet* allows us to think about acts of writing as performative acts, that is, as acts that do what they write and show writing as action [PORTELA-GIMÉNEZ 2016]. Constituting itself as an unfinished and fragmentary work, whose text has to be repeatedly edited and organized, the *Book of Disquiet* shows us the editorial process as another element in the construction of the book. Working with the concept and the horizon of the book as an imaginary operator for ordering the awareness of existence and the proliferation of thought, the *Book of Disquiet* makes it possible to understand the book-function as an operator in the production of the literary – point of convergence for the actions of writing, editing and reading. Finally, by offering itself as an object for multiple readings, that is, as a machine for generating interpretations, the *Book of Disquiet* bears witness to the codependence between writing and reading, and shows us the retroactive production of meaning through acts of reading.

This way, our archive moves away from intentionalist editorial principles replacing them with socialized editorial principles. However, its goal is not only create a meta-editorial perspective that allows us to observe specific editorial interventions on the documentary *corpus*. It is also to extend that meta-editorial function to a level of virtualization that makes it possible to realize new hypotheses of editorial organization, opening it up to a play of possible futures. It is further to

think about the potentiality of textual construction not only at the level of editing but also at level of writing [PORTELA 2016]. The authority of the text as an exclusively hermeneutic object, that is, an object destined to acts of interpretation and reinterpretation, gives rise to acts of rewriting that inscribe themselves, verbally and cognitively, in the discourse of the work, instead of adopting the meta-discursive protocols of reading as an institutionally regulated practice of interpretation.

Although the *LdoD Archive* also contains layers of genetic and editorial reconstruction of the text – implementing current practices of genetic and critical digital editing –, its rationale is not limited to this representational level. Its goal extends to a simulation level, which uses textual encoding and programming to increase textual flexibility, i.e., its projectuality – the fact that it is a work in progress that remains in progress. Both book-concept and book-object can be disconnected from a principle of mimesis and emulation, and can be explored through the differential system established by the processability of text at level of writing, editing and reading. The reader-, editor-, book- and author-functions have been virtualized in this digital reimagining of the *Book of Disquiet*, making it possible to experiment with the production of the literary as a result of a dynamic field of relations whose material and discursive form can be apprehended through role-playing. Writing that writes itself, editing that edits itself, reading that reads itself, book that becomes book – four processes whose processuality the *LdoD Archive* attempts to model. We could say that the awareness of self-production inherent in a writing process, which is the basis of heteronomy theory in the writings of Pessoa, is simulatorily extended to the potentiality of self-production that originates in the actions that produce the literary as an experience. *Subject-author*, *subject-editor*, *subject-reader*, and *subject-book* would be the four heteronyms of this experience.

2.3. From Textual Encoding to End-user Interaction: Project Workflow

The new perspective introduced by the *LdoD Archive* raises some technical issues in respect to the traditional scholarly method of critical editing. Two aspects characterize the interaction with the book that are absent in previous works:

- Lack of a temporal divide – in traditional critical editing the work is

- placed within a scholarly context, where the expert analyses the authorial sources in isolation and makes public her critical editing in a single step. Further analysis of the work corresponds to another layer on top of the previous analysis. In the *LdoD Archive* it is possible to intertwine the contributions through a continuous process of interaction with the work by creating and changing the annotations and regrouping of the *Book of Disquiet* fragments. The traditional layers of interpretation with an explicit timestamp are replaced by an interconnected graph of relations that has no begin neither end.
- Socialization of editing – the temporal scattering of the interpretations of the work is intensified by the socialization fostered by the platform which accommodates expert and lay contributions. Although preserving some level of separation between those two types of contribution [SILVA-PORTELA 2013], the platform allows the extension of each other's contributions by providing extension mechanisms across virtual editions. This means that future changes to extended virtual editions impact on the editions using them. Therefore, the Web 2.0 is the environment of choice to support the interactions with the archive.

The *LdoD Archive* was designed to support these new requirements. Therefore it has to accommodate both the scholarly workflows of critical editing and the dynamic interactions fostered by a Web 2.0 platform.

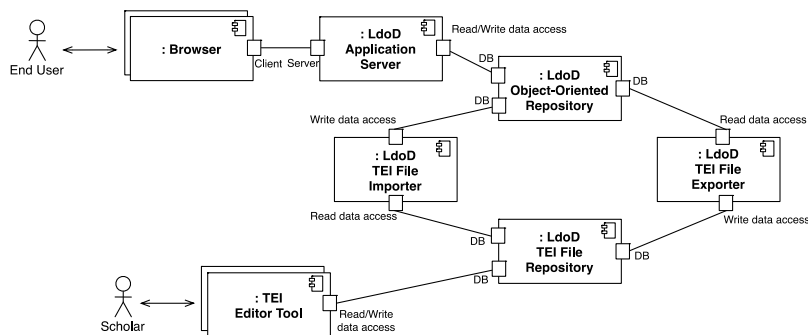


Fig. 2.2. *LdoD Archive* architectural view.

Figure 2 presents the main components of the *LdoD Archive* and the interaction entry points with the system, which correspond to the scholar and layperson interactions. Scholars use the traditional TEI

editing tools which are enhanced HTML editors used by scholars to transcribe and annotate the authorial sources. These annotated fragments from the *Book of Disquiet* are stored in a file repository (LdoD TEI File Repository) from where they are imported into an object-oriented database (LdoD Object-Oriented Repository) through the LdoD TEI File Importer that parses the files and generates their representation in an object-oriented structure. End-users, both scholars and laypersons alike, can interact with the object-oriented repository using a browser that accesses an application server (LdoD Application Server). Finally, the architecture allows the exporting of the *LdoD Archive* back into the TEI format using the LdoD TEI File Exporter. This allows, for instance, the export of a virtual edition to be used in other working contexts.

Although complex due to the introduction of the importers and exporters and the consequent duplication of the information, this architectural structure is necessary in order to accommodate the dynamic aspects of the archive. The TEI format is not suitable to support the dynamic and concurrent change of its structure. Therefore, the implemented solution results from a compromise that integrates the traditional workflows of textual encoding for critical editing with the dynamics of Web 2.0 interactions.

The layperson's working workflow is done through the browser, once the fragments from the *Book of Disquiet* are encoded in TEI and imported into the object-oriented database. It is through the browser interface that she interacts with the book, both to read it and to collaborate in the construction of virtual editions. It is in the context of virtual editions that the simulation capabilities of the archive are explored. The users can create their own virtual edition of the *Book of Disquiet* by selecting a set of fragments and annotating them, either through open comments or by the definition of a taxonomy used to classify the fragments. Additionally, the user can export a virtual edition to the TEI format to be accessed using TEI-compliant tools. Note that the LdoD Application Server guarantees the correct manipulation of the *LdoD Archive* assuring that the consistency of information is preserved for each of the manipulation operations, which allows the archive to be represented back in the TEI format.

The *LdoD Archive* supports the scholar's working workflow through the interaction through TEI Editors, where the encoding using TEI is done. TEI editors support the correct encoding of the fragments from

the *Book of Disquiet*. Besides the static correction provided by the editor's schema, the scholar can also use the LdoD TEI File Importer to verify the semantic correctness of the transcriptions. For instance, it is possible to check that the intra- and inter- fragment XML:ID references are consistent. Additionally, the archive enables the visualization of fragments that have syntactic and semantic errors in order to facilitate their identification and correction. The Web 2.0 user interface can also be used to create their own virtual editions which may, in turn, be used by other virtual editions, which are built on top of the scholarly virtual editions. Actually, the project's collaborative virtual edition, under the responsibility of the project members, is being implemented using this approach.

2.4. Conclusion

This article describes how the process of digital remediation can be used to shift our focus from a purely representational perspective to a perspective that embeds the literary work within a conceptual framework where user interactions are contextualized as simulations of the production and analysis of the literary work. To achieve this level of simulation we had to build on top of existing techniques for digital representation of text by integrating standard TEI encoding into a more dynamic environment. This dynamic environment, which is described as a software architecture, gives rise to new workflows of critical reception, editing, and rewriting, where the boundaries between scholar and layperson are blurred through a socialization process, and where the thorough modeling of textual marks is expanded to the modeling of the potentiality of textual fields. Once the descriptive and analytical representation of textual markings is subsumed within a simulatory and performative environment of processable discursive affordances, the digital archive becomes a material model of the literary text as a field of interactions. *Author, editor, reader, and book* have been abstracted as virtual functions beyond the horizon of digital processing as bibliographic representation.

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"No Problem Has a Solution: A Digital Archive of the *Book of Dis-*

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