

rica e simbolica. Sia nel manoscritto di Sofia, sia in altri tre codici selezionati, le miniature sono collegate alla prima parte; ma solo il miniatore del *Physiologus* di Sofia scelse di collocare sistematicamente ogni immagine proprio dopo questa sezione, obbligando lo sguardo del lettore a fermarsi immediatamente, dopo aver letto la porzione di testo connessa all'illustrazione.

In conclusione, le indagini di Lazaris avvalorano l'idea – già formulata dagli antichi – che le immagini abbiano un ruolo preminente entro i processi mnemonici e cognitivi. Lo studioso ha inoltre dimostrato che tale superiorità diventa sempre più evidente, qualora le miniature siano state delineate con una particolare iconografia, e collocate entro uno specifico layout di pagina. Portando avanti le sue ricerche – esaminando ad esempio tutte le miniature del *Physiologus* greco e quelle dei trattati di ippica –, Lazaris potrebbe quindi spiegare meglio quale ruolo ebbero le miniature scientifiche agli occhi dei lettori medievali, e perfezionare le nostre attuali idee sui meccanismi di lettura entro documenti multimediali, quali furono, appunto, i codici miniati. Senz'altro, le indagini dello studioso hanno già pienamente confermato la validità di un assunto di Michel Lemoine, inserito nella presentazione degli Atti del convegno *L'image dans la pensée et l'art au Moyen Âge* e citato da Lazaris al termine della sua lezione di Bologna. Ossia, l'idea che «l'image pour l'image est un produit du *xxi*^e siècle», e che, invece, «nos ancêtres [...] se donnaient le temps de réfléchir à ce que signifiait ce à quoi ils allaient donner forme».

FEDERICO MILONE - LUCIA GIAGNOLINI

📖 Le carte immateriali: filologia d'autore e testi nativi digitali (Pavia, 11-13 dicembre 2023)

The conference *The intangible papers. Authorial philology and born-digital text* was born as a response to the growing need to adequately treat and protect authors' born-digital archives. The conference, organized by the Pavia Manuscript Centre (Centro per gli studi sulla tradizione manoscritta di autori moderni e contemporanei) in the context of *Autografestival* 2023, was held at the University's Aula Magna on December 11-13, 2023.

Guests from various Italian and foreign universities and institutions shared theoretical reflections and research experiences related to how digital native archives are acquired, preserved, and studied. The objective was to promote the sharing and development of protocols and

methodologies aimed at facilitating a significant transformation in the management of this specific source type and in shaping the future of philology.

On December 11, 2023, the conference was inaugurated with opening speeches: Annalisa Rossi, Superintendent of Archives and Bibliography of Lombardy, highlighted the importance of collaboration among institutions in establishing shared standards and models, and the safeguarding and supervisory role of the Superintendence, which also applies to digital heritage. This was followed by greetings from the director of the Cultural Heritage Area of the University of Pavia, Lorenzo Duico, who presented the Area's progress in the digital field, with particular attention to the developments and results obtained by the University's Digital Library.

In Italy, the idea of collecting and preserving digital archives alongside paper holdings was advanced in 2009 by journalist Beppe Severgnini who, speaking at the conference, reported on the genesis of the idea and his personal experience as the first contributor to the project *Pavia Archivi Digitali* (PAD), which was later explored in detail in Lucia Giagnolini's talk.

The conference was then marked by a keynote speech by Giuseppe Antonelli, president of the Pavia Manuscript Centre, which dealt with the transformation of the writing process and authorial philology in the digital age. Exploring the views of well-known Italian authors, such as Italo Calvino, Umberto Eco, and Alberto Moravia, Antonelli illustrated the change in the way Italian writers approached writing with the advent of computers. Faced with such a massive transition, the question becomes a matter of method, since we are witnessing a true paradigm shift: Antonelli, pondering the applicability of traditional authorial philology methods, hopes that the University of Pavia will stand as one of the driving centres of the new season of these studies.

The first session, coordinated by Lucia Roselli, focused on the archival perspective of the born-digital.

Stefano Allegrezza (University of Bologna) outlined how the ongoing digital revolution has brought about substantial changes in personal archives, since activities are increasingly involving the use of personal computers, tablets, and smartphones for tasks such as document creation, note-taking, writing texts, conducting studies, taking photographs, reading books, and engaging in social networks. Allegrezza examined the critical issues that make the preservation of these archives extremely difficult, such as technological obsolescence of media, formats and software, and the presence of account credentials of various

kinds, which are often an insurmountable obstacle to access. Allegrezza concluded the speech by presenting the state of the art in personal digital archiving, describing the most important national and international projects and the most recent lines of research.

Anna Rovella (University of Calabria) developed the topic of email preservation, since emails are one of the most fragile components of a digital archive: an ephemeral element at the same time dense with an informational potential, whose absence severely impoverishes the overall significance of documentary complexes. In recent years, the fruitful sharing of national and international experiences has stimulated reflections that range across the different and complex dimensions of the theme, that is still evolving even if pressed by more immediate forms of communication. Rovella analyzed critical focal points while also outlining solutions and possible developments. She suggested that it may be advantageous to adopt a holistic informational vision that allows for the best representation and preservation of personal archives, email accounts, and other communication components. In particular, Rovella advocated for the representations of entities and their relationship with the semantics of objects, along with the agent's role: the aim is to find a balance between document access needs, data protection laws, and both short and long-term digital preservation models.

Lucia Giagnolini (University of Bologna), scientific secretary of the conference, presented the experience of the *Pavia Archivi Digitali* (PAD), the first project in Italy to address the problem of acquiring, managing, and preserving born-digital literary material. In 2021 the PAD project and materials became part of the Manuscript Centre. Giagnolini presented the history of the project, its current state of the art and the reasons behind its recent remodeling.

The speech provided an overview of the Centre's new Digital Preservation Workflow, developed by Primo Baldini and Lucia Giagnolini within the framework of the OAIS model. Operations – from acquisition to consultation – are now gathered within a single application written in Java and supported by open-source libraries and softwares.

While the remodeling operation has reached its main objectives, primarily that of simplification, Giagnolini also points out what remain open issues and future work, such as the description and representation of archives, the authors' contract, automated consultation techniques, email acquisition and web archiving.

The second day was primarily dedicated to digital curation and philology for born-digital texts. The first panel, chaired by Michelangelo

Zaccarello, addressed some preliminary issues related to the management and exploitation of born-digital materials.

The presentation by Christopher Lee (University of North Carolina) provided an overview of the challenges in digital curation, defined as «maintaining, preserving, and adding value to digital materials». The initial aspect addressed pertains to the representation of digital resources. Concrete examples include examining an aggregation of objects or a single object, analyzing a file through its file system or, at a very different level of granularity, as a raw bitstream. Faced with the proliferation of perspectives, Lee proposes the use of BitCurator, a software developed at the University of North Carolina to apply digital forensics techniques in the humanities.

According to Lee, another aspect to consider is the duality of digital curation. Duality encompasses various problems, such as investigating data synchronously or diachronically; retrieving information in advance (just-in-case) or on demand (just-in-time); reproducing old files with an emulator, or conversely, migrating data to less obsolete environments. Finally, the alternative between the ‘custodial perspective’, focused on preserving the material produced by an author, and the ‘post-custodial perspective’, based on the more inclusive idea of accompanying the curation process of born-digital material, without focusing on the transfer of data to a specific institution.

The latter theme was also central to the presentation by Justine Mann (University of East Anglia), who outlined the practices and an initiative of the Archive for Contemporary Writing, established in 2015. This institution created and implemented the Storehouse Model: authors lend their archival documents for a specified period and can reclaim them at their discretion. This system enables overcoming a potential lack of financial resources and allows authors not to forfeit a potential source of income.

This model forms the basis of a recently concluded project dedicated to underrepresented poets. The core idea is to raise awareness among a select group of emerging poets (from categories typically overlooked by the literary establishment) about the value of their drafts and the creative process in general. The innovation lies in the close collaboration between poets, critics, and archivists. The four authors involved in the project deposited a selection of documents, engaged in a dialogue about their creative methods, shared their stories and practices in public meetings, and ultimately produced a creative or critical response to the project, resulting in works ranging from sonnets to critical texts.

Subsequent presentations, featured in panels chaired by Giorgio Pannizza and Paola Italia, focused on singular case studies.

Laurent Alonso, Aurèle Crasson, Jean-Louis Lebrave, and Jeremy Pedrazzi (ITEM) presented the *Derrida exadecimal* project, specifically highlighting the results of a forensic investigation into a specific work by the philosopher, *Le toucher*. The project's objectives revolved around exploring data from the philosopher's digital collection and utilizing it in an ecdotic context. Relevant investigations from a philological perspective are varied and partly contingent on the hardware in which the files are stored. Much information can be easily retrieved, including names, extension, size, author's name, number of revisions, creation and modification dates. Conversely, other information requires more intricate operations, such as recovering hidden and deleted files. Finally, the hexadecimal system enables further progress by providing information on when a file was printed, deletions and corrections, as well as the order of the text blocks on which the author worked.

All this knowledge proves fundamental in the concrete reconstruction of *Le toucher's* genetic history. The investigation of the entire digital tradition with these methods has enabled the establishment of a secure chronology, relying on both metadata obtained through forensic methods and textual comparisons with Medite, the automatic collation system developed by Jean-Gabriel Ganascia. This system facilitates the automatic identification of the four fundamental operations of genetic criticism: erasures, insertions, substitutions, and dislocations.

Federico Milone (University of Pavia) presented an analysis of the novel *Sirene* by Laura Pugno, a contemporary Italian author. The case is noteworthy as it involves a substantial genetic dossier that is also born digital, featuring multiple editions.

The analysis of the preparatory materials reveals that digital archives cannot currently be considered independent entities. In many cases, research initiated in the digital realm transitions between the digital and paper domains and vice versa. In essence, the immaterial coexists and engages in a dialogue with the material.

Additionally, born-digital capabilities allow for the retrieval of a vast and often unwieldy dataset, sometimes even causing disorientation for scholars. In the case of *Sirene*, the proliferation of redactions complicates a comprehensive collation with traditional methods, making it challenging and time-consuming. In such instances, certain digital environments tailored for distant reading, such as Voyant, prove beneficial. Distant reading can guide the search by swiftly revealing drafts

with significant variants. In the case study, the emergence of characters and events in the third of the eight drafts suggests that this specific draft serves as a key element in the compositional path. However, at the current stage, the close-reading – i.e. the meticulous examination of the texts – remains indispensable for a comprehensive understanding of the genesis of the works and the relationships between the drafts.

Lamyk Bekius (University of Antwerp) presented additional case studies on born-digital works, this time focusing on examples from the Belgian region, showing an increasing level of granularity in material analysis.

The first subjects of analysis involve the floppy disks of the poet Herman De Coninck, comprising approximately 600 files, primarily essays on poetry and literature later compiled into volumes, and the word files produced by Bart Moeyaert for the trilogy *The Whole Life*. The collation of these born digital documents sheds light on creative uncertainties, such as the structure of the volumes, the selection of the narrative voice, or the emphasis on certain characters and narrative points.

A significantly more innovative analysis method pertains to the *Mon-dini* story by David Torch, conducted using Inputlog, a keystroke logging tool developed by the University of Antwerp. This tool records every keystroke and mouse movement, saving versions of the text at the beginning and end of each work session. The author's consent to the use of this tool allows for analysis at an exceptionally fine level of granularity. This approach leads to nanogenesis, an intricate level of detail impossible to achieve with analog texts, tracing each intervention over time.

Emmanuela Carbé (University of Siena) presented an update on the digital materials of the archive of the poet Franco Fortini. The scholar begins with the definition of «digitale d'autore» as «an entity or an aggregation of entities installed on a digital medium by an author or by others producing contents in interrelation with an author within a specific context». This definition encompasses the materials produced by Fortini and stored on his floppy disks.

The case is intriguing because the author, unlike many of his contemporaries, embraced the use of personal computers from the outset, and acquired the first Macintosh in the mid-1980s. One of the author's last text files, *Notturmo 1994*, vividly illustrates how forensic investigation can establish connections between texts and shed light on their meaning. The short prose, preserved only in digital format, is positioned just before an «unsent letter» addressed to the poet Giovanni Raboni and another brief commentary, with an autobiographical theme. An analy-

sis with BitCurator enables the generation of a hexadecimal mapping of the file, revealing that the three texts are likely not contemporaneous or, at the very least, not written in the presented order.

The last day of the conference was devoted to the topic of dissemination and future perspectives on the topic of personal born-digital archives. After an introduction provided by Giuseppe Antonelli, the stage was left to the presentation of the experiences of two institutions by now rather advanced in the management born-digital materials: the British Library (UK) and the Harry Ransom Center (Austin, Texas).

Callum McKean, digital lead curator for contemporary archives and manuscripts at the British Library, outlined the history and scope of the digital collections at the library, alongside the current workflow for acquiring, preserving, and providing access to them. A special effort has been conducted in appraisal, processing, preservation, discovery, and delivery of historical email archives, using the software ePADD. McKean considered some of the key challenges which repositories collecting this kind of material face – especially in terms of access, engagement, and enabling research – and pointed towards some of the ways in which the British Library hopes to face them both now and in the future. McKean's talk revealed a particularly organized infrastructure and a remarkable institutional sensibility: of great interest is the launch of a training course for all British Library staff through the Digital Scholarship Training Programme to generate awareness and skills within the library.

Brenna Edwards, manager for digital archives at the Harry Ransom Center, presented current practices around born-digital material in collections at the center and how they have evolved over time. The first recorded accession with born digital materials at the Ransom Center dates to February 1992 and since then these acquisitions have seen rapid growth, such that in 2018 it required the support of the Texas Advanced Computer Center (TACC) storage to hold materials. Talking about the technologies used, best practices employed, and the trickiest situations, Edwards showed insights on born-digital holdings, which consist in 138 collections (mostly hybrid), 8 TB of processed material (977,933 files) and 21 TB of full disk images and extractions. Notable among them are born-digital materials from the collections of Gabriel Garcia Marquez, Norman Mailer, Kazuo Ishiguro, Robert De Niro, Warren Skaaren and Tom Stoppard.

The last talk, introduced by Francesca Tomasi, was devoted to the legal perspective: lawyer Alessandro d'Arminio Monforte highlighted

the complexities of inheriting digital assets under Italian and international law, encompassing the crucial issue of copyright in the digital context as well. Since the rules on inheritance remain unchanged, the inheritance of digital assets became extremely complex, not only for their very characteristics, but also for IT-legal problems, such the presence of account credentials and contracts with providers of commonly used services, like email and Cloud accounts. D'Arminio Monforte concluded his talk with practical suggestions on whether it is possible to conduct a digital succession planning within the Italian legislative context.

The conference ended with a round table discussion, moderated by Francesca Tomasi, which drew conclusions from the three-day discussion.

Francesca Tomasi emphasized how born-digital involves the inter-relationship of multifaceted issues and, for this reason, it also implies a necessary collaboration of different disciplines: archival science, philology, computer science, law studies.

Stefano Russo reported on the prospects of using artificial intelligence, hypothetically employable for a semantic system able to trace connections between documents, simplifying description operations and content analysis.

Roberto Rosselli Del Turco raised the question of tools to carry out digital philology operations: are the tools we have today up to the task of analyzing born-digital archives? Are the encoding languages used today, such as XML-TEI, usable or sufficiently representative? Rosselli Del Turco advised that we have to relate to higher levels of complexity than at present on this scale as well.

Simone Albonico, echoing the theme of tools, highlighted how the experimentations carried out on born-digital documents are perhaps more advanced in the archival domain than in the textual and editorial domain, which in many ways remains undiscovered and unexplored. The importance that *critique génétique* has always given to the media, and on what the media actually have to say, is perhaps more readily in tune with born-digital; whereas the tradition of Italian authorial philology, since it has always sought to abstract from the media, is more difficult to place in this context: the undertaking still seems titanic.

Finally, Giuseppe Antonelli wrapped up the topics covered by the conference by posing three questions for the upcoming future:

1. Is it possible to build and share, at an international level, a specific protocol related to the acquisition, processing, access, and preservation of born-digital archives of literary interest?

2. Is it possible to define new methodologies for the study of authorial philology applied to born-digital texts?

3. Can we imagine a digital ecosystem that enables interoperability and mutual queries between text databases and born-digital documents?

Antonelli concluded by opening up to the idea of launching an annual event dedicated to digital philology and born-digital texts.