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## Among notes: historical research and representation of information

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**Abstract:** The notes area and the physical description of a bibliographic item constitute an important source of information for professionals dedicated to understanding facts and events from past times. Accordingly, this paper aims to present some resources available to guide librarians in the process of representing bibliographic heritage collections in digital environments. It is a theoretical reflection on the opportunities and omissions in the descriptive process of informational items, related to the notes area and the physical characteristics of the document. The methodology is based on bibliographic research, having as empirical categories descriptive representation, organoleptic properties, and the materiality of the document. It is noted that most items represented by librarians and made available digitally lack a description that is more compatible with the demands and needs of historians, including information about the target audience and the nature of the documentation. This reality points to a need for a change in the information professional's approach towards greater detail of the resource.

**Keywords:** descriptive representation; bibliographic materiality; historical research; digital environment.

### 1 Introduction

In a study published in 1994, *Forms and Meanings: Texts, Performances, and Audiences from Codex to Computer*, Roger Chartier outlined the dream of “extravagant happiness” (Borges, 1941<sup>1</sup>). This would be the place for all media, from different time periods, spaces, formats, and contents, to coexist simultaneously, with methods and techniques for maintenance, preservation, and access to information equivalent to the physical characteristics of the script.

Presently, despite some modest investment in converting born digital material, whether manuscript or printed, into digital format, the recovery of information—within the perspective of the history of education in the state of Maranhão—has been driven by the availability of free and unrestricted access to informational resources in digital form, or hindered by the impossibility of consulting the original documents due to their limited lifespan or state of preservation<sup>2</sup>.

<sup>1</sup> J. L. Borges, **La biblioteca de Babel**, 1941. Available at: <https://ia800504.us.archive.org/18/items/TheLibraryOfBabel/babel.pdf>. Accessed April 27, 2025.

<sup>2</sup> This can be observed through on-site visits to Maranhão's memory institutions—the Benedito Leite Public Library (Biblioteca Pública Benedito Leite – BPBL) and the Public Archives of Maranhão (Arquivo Público do Estado do Maranhão – APEM). Both institutions maintain projects aimed at extending the lifespan of documents, such as digitization and microfilming techniques, as well as



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Considering that investments in the sector of educational bibliographic heritage are largely scarce and unsupported by public policies that would ensure the maintenance, preservation, and free access to the documents under its custody, our aim is to understand the mechanisms employed to guarantee the continuity of historical research in a digital environment, taking into account the originality and authenticity of historical documents, based on library resources or techniques that help characterize information sources with greater precision and relevance for historiographical study.

The “extravagant happiness” mentioned by Roger Chartier remains as a solid challenge even nowadays. Paradoxically, there are now more resources available for document conservation, restoration, and preservation. The current technologies for these purposes are numerous, yet collections in archival and memory institutions are still frequently found in disarray, deteriorated, or degraded. Moreover, collections composed of materials from earlier periods that have survived to the present are scarce. The few bibliographic artifacts that do exist are kept under the protection of official institutions, where they are displayed as rare items. Historians, in turn, have limited access to these sources—access that is often remote—reducing their ability to carry out more accurate analyses.

Where are the bibliographic collections that reflect or represent past cultures? When they do exist, the few remaining traces demand greater attention from the institutions responsible for their preservation and protection. Indeed, it is difficult to imagine that all artifacts could remain intact, preserved, and fully conserved over time.

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conservation and physical preservation initiatives. At the BPBL, for example, it is interesting to highlight the project *Preservation and Modernization of the Rare Collection of the Benedito Leite Public Library* (2013); the study by Maurício José Morais Costa, Bruno Fortes Luce, and Maria Cleide Rodrigues Bernardino, *The Digital Collection of Rare Works of the Benedito Leite Public Library: Contributions of Open Access to Achieving the Sustainable Development Goals* (available at: <https://www.scielo.br/i/emquestao/a/KNp9WNN6yn3RbXwPpTmQ5jP/?format=pdf&lang=pt>, accessed January 28, 2026); and *Digitization of Rare Works and Maranhão Newspapers of the Benedito Leite Public Library: Preserving Information Through Technology*, authored by Carla Jeane dos Santos Castro (available at: <https://periodicoseletronicos.ufma.br/index.php/bibliomar/article/view/4940/3315>, accessed January 28, 2026). However, in some cases there are wear and deterioration of documents, whether due to improper storage, the absence of conservation and preservation policies, or other factors that cannot be fully addressed here. One example of the lack of public policy for memory institutions in Maranhão can be found in reports denouncing the risk of losing historical documents at APEM, available on the website of the Legislative Assembly of Maranhão: <https://www.al.ma.leg.br/sitealema/tag/arquivo-publico/> (accessed January 28, 2026). Additional irregularities related to the neglect of cultural institutions—specifically APEM—can also be found on the Agência Tambor website: <https://agenciatambor.net.br/geral/o-que-significa-a-violencia-contra-o-arquivo-publico-estadual-do-maranhao/> (accessed January 28, 2026).

Despite the coexistence of different formats, it is possible to affirm that newer modes of recording information tend to be embraced by future generations.

In the field of historical research, various types and forms of written media have been encountered in historiographical practice. The act of retrieving and analyzing printed documents available in digital form necessarily centers on the source content, although the format through which information circulates shapes the researcher's perspective and the assimilation of that content. Elements such as the size of the work, its dimensions, type of paper, font, line spacing, illustrations, and characteristics of contemporary editorial production all matter. However, aspects such as smell, color, and texture also influence and affect the historian of education, as do the procedures and historiographical operations mobilized to interpret the source document.

According to Roger Chartier (1994), form shapes the reception of writing. This leads to the following question: how have printed documents that are digitally accessible in virtual environments and indexed in institutional repositories been represented in their entirety? What practices have librarians adopted to ensure the integrity of historical documents that now circulate in digital form? How do cataloging standards guide descriptions that more closely reflect reality? In the digital age, what innovations are introduced by the current standards in force? These are some of the concerns that have informed my practice both as an undergraduate historian and as a professionally licensed librarian.

In other words, this study seeks to understand the historical development of cultural media throughout human history, as well as the shifts, acceptance, and neglect of the original document, which acquires the status of a rare item and thus remains restricted due to its material or symbolic condition. The transition from one medium to another entails numerous disadvantages for the reader-historian. This is one of the concerns surrounding historical documentation in digital format—i.e., available on a computer screen and therefore conditioned by the modes of reading and interpretation imposed by a digital interface, which, according to Roger Chartier (1994), results in a linear, fragmented, and reduced reading experience.

The discussion around the field of book history has largely drawn on the studies of Roger Chartier, particularly the following works: *Le livre en révolutions*; *Qu'est-ce qu'un auteur?*; *Le monde comme représentation*; *Forms and Meanings: Texts, Performances, and Audiences from Codex to Computer*; and *Cultural History*:

*Between Practices and Representations*. In these works, the author examines practices of book representation over time, as well as the forms of production, circulation, and consumption, while also reflecting on the conditions and intentions involved in the book-making process. The author further considers the materiality of the medium, attributing to it the fundamental conditions that shape its appropriation.

André Belo (2008), in *História & livro e leitura (History, Books, and Reading)*, inquires about the changes that digital technology introduces into communication between individuals and highlights the transformations that have taken place in the production of bibliographic resources, especially with the emergence of the typographic man of the Gutenberg era. From a historical perspective, this author also reflects on the “human comedy” involved in the historical processes of book production and circulation.

For his part, Robert Darnton, in the essay *What Is the History of Books? Revisited* (published in Brazil in 2003), takes the opportunity to address some of the gaps left in the first edition (1982) of the text concerning the communication circuit. He offers an important reflection on the birth of the book with the typographic man or the Gutenberg era, while noting that this perspective does not encompass the media produced before the fifteenth century—such as those dating back three millennia before Christ—nor the informational resources of contemporary times, including the various forms of electronic media.

In ancient times, a wide range of materials could serve as a script medium, such as palm leaves, shells, seeds, clay tablets, stones, wax, among others. It is therefore important to understand how these materialities shape the ways in which individuals relate to script—posture, modes of reading, forms of engagement with the text, the ability to annotate or compare passages, for example.

In order to understand the properties of paper documents and their connections to digital texts, the studies of Paulo César Botosso (2011) are particularly relevant, as they emphasize the importance of smell, color, texture, and how such conditions can influence the reading and comprehension of texts. At the same time, this discussion highlights the challenges arising from these material conditions and the ways in which library science has supported the processes of descriptive representation of information, enabling researchers to perceive aspects of the original document when they have access only to its digital version.

Thus, it is assumed that historians, in their historiographical practice, do not concern themselves solely with content. The medium is essential. In this regard, attention is given, on the one hand, to the writing strategies and intentions of authors—which fall within the author's domain—and, on the other hand, to the devices resulting from the decisions of editors and typographers and the resources available within the typographic world. The reader—understood here as the historian who attempts to comprehend their object of study within a specific materiality—operates through the production of meaning derived from what is read and from the composition of the text. To this end, it is necessary to establish the connection between the textual dimensions that serve as support and the practices that appropriate them (Chartier, 1988)—that is, the ways in which the text can be handled, apprehended, and understood. Under these circumstances, especially librarians and archivists play a crucial role in mediating the perception of materiality conveyed through descriptive records of documents that are accessible remotely in digital form.

## **2 Materiality and transformations of the script**

In the technological world, historical research presents itself as both a challenge and an opportunity that has impacted historiographical practice in positive as well as negative ways. The reliance in the digital object, which facilitates the circulation of source information, leads to a direct analysis of the script's content, disregarding the materiality of the object under investigation. On the other hand, it provides the convenient possibility of accessing the content. Even so, aspects related to the properties of documentation are not emphasized or described by the team responsible for processing information in digital form.

Over twenty years of research, some limitations in digitized documentation. Institutional, local, and national repositories have been used to store, preserve, and freely provide large quantities of historical documents<sup>3</sup>. Digital newspaper archives primarily aggregate newspapers and magazines. There's a dubious sense of trust in the functionality and reliability of these tools, which offer services and products that, in some way, have met researchers' investigative needs—such as locating previously

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<sup>3</sup> Among the main limitations are the following: availability—pages may be removed or become inaccessible; dependence on an internet connection; incomplete digitization; and the quality of the digitization itself.

defined terms, retrieving information quickly, accessing documents remotely, ensuring open access, and navigating a broad and varied documentary mass<sup>4</sup>.

On the other hand, the details of description, the specificities, and the particular characteristics of the document's physical materiality are not made evident. This calls to reflect on library practice in relation to processes of descriptive representation, in which information is extracted from the document to ensure a representation as close as possible to the original—something that has not yet been fully implemented. Although content is important, it can only be fully consumed or received if the materiality and the medium through which the information is conveyed are taken into consideration.

In light of this, the following questions arise: how can these characteristics be described in the process of documentary description? Is there any advantage in documentary description when recording the organoleptic properties of a document with historical or informational value? Can the identification of these elements provide further insight into the uses, production contexts, and intentions of the subjects involved in the historical narrative? Might such information reveal mechanisms that attest not only to authenticity but also to the inherent properties of the non-digital document, such as the reliability and credibility of the research source? How are capture and storage carried out? In what way is technical processing performed to ensure not only thematic analysis of the document, but also its correspondence with the material support of the script?

According to Leandro Ferreira Souza (2025) and Paulo Cesar Botosso (2011), organoleptic properties—such as color, brightness, light, odor, texture, sound, and taste—can be perceived by the human senses. Thus, some of these elements highlight the integrity of the document and also attest to its vulnerability in terms of the integrity and originality of a manuscript. Yellowed pages, the presence of dust on paper, the texture of crumpled or perforated pages, scribbles or signatures, and even mold define a period and the ways in which the historical source was used; they indicate the document's circulation, the institutions responsible for its safeguarding, and the procedures involved in its recovery and preservation, including restoration and binding

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<sup>4</sup> This observation arises from the investigative practice of the Center for Study and Documentation in the History of Education and Reading Practices (Núcleo de Estudo e Documentação em História da Educação e das Práticas Leitoras – NEDHEL)

interventions, as well as, to a lesser extent, traces of reading practices, such as annotations, underlining, and marginal notes left by readers.

In the same way, Samuel Luis Velázquez Castellanos (2017) discusses the selection or proposal for the renewal of schoolbooks in the province of Maranhão, emphasizing texture and paper color as basic principles to be observed: “Another possibility lies in the hygienist requirements established from the last quarter of the nineteenth century [...] formalizing requirements to be met, among them: the size of the letters, the specific color of the printed paper—since it could not be white—and the definition of its texture [...]” (Castellanos, 2017, p. 276 - translated by the author from the Brazilian edition).

A retrospective point of view of the history of the book makes it possible to understand the informational supports used as material bases or raw materials for bibliographic production in antiquity and in the Middle Ages, such as clay tablets; papyrus and parchment in scroll or codex format; the use of binding techniques and specific details in the document itself, such as wooden covers and illuminations made with minerals. Although the importance of preserving documents and bibliographic historical heritage is widely acknowledged, many of these records, when migrated to a new medium, reveal a disregard for their former medium and a misplaced sense of trust in the most recent one. This is a concern that has challenged historiography, considering that

The meaning of the text, whether canonical or ordinary, depends on the forms that make it possible to be read—that is, on the various characteristics of the materiality of the written word. For printed objects, this meant the format of the book, the layout of the page, how the text is divided, whether images were included, as well as typographical conventions and punctuation (Chartier, 2012, p. 20 - translated by the author from the Brazilian edition).

Furthermore, there are other disadvantages related to digitized documents. The concept of “provenance” is a principle of archival science aimed at ensuring that documents remain grouped in their respective series and fonds. In the digitization process, however, document retrieval is often random. Researchers may neglect the act of retrieving information in its totality, circularity, and original organization. Roger Chartier (1994) warns that, in screen-based reading, “[...] the perception of works as works becomes more difficult. Reading on a computer screen is generally discontinuous reading that uses keywords or thematic cues to locate desired fragments

[...] without having the textual whole from which they are extracted.” The author still adds that:

The discontinuity and fragmentation of reading do not have the same meaning when they are accompanied by a perception of the textual totality contained within the written object, and when the illuminated screen that allows to read fragments of texts no longer displays the limits and coherence of the corpus from which they are drawn (Chartier, 2012, p. 11 - translated by the author from the Brazilian edition).

This also affects interpretation. Knowing that a historical record was preserved alongside other documents makes it possible to identify intentions and human interventions in the ordering of documentary records, thereby imposing a limited and associative reading. Paulo Cesar Botosso (2011) also stresses the importance of respecting fonds and series. Materiality asserts itself and, with it, historiographical operations adapt to the limitations of the new medium.

Many researchers have relied on digital versions of bibliographic historical heritage sources, a condition that weakens or minimizes the possibilities for interpretation and for establishing connections among events. These are clues inherent to the documentation itself that restrict a more precise and pertinent investigation—genuine characteristics of the source’s materiality that may support plausible approaches in historical script, yet are not expressed in the digital document. However, Roger Chartier (2012, p. 22 - translated by the author from the Brazilian edition) states that:

The perception of the whole must be apprehended. The transition from the scroll to the codex was an extraordinary revolution: the ability to move between passages of a text sped up the cognitive processes of analysis, comparison, and consultation, expanding the reader’s possibilities to annotate, comment, compare, and read in a more dynamic and interactive manner.

Every document possess a genuine nature: smell, color, and texture are intrinsic characteristics of the medium that are not preserved when information from a traditional source (in this case, manuscripts and scripts in their original format) migrates to an electronic device. When a manuscript or a script is converted into digital format, its materiality changes, moving into a new condition and, therefore, inducing a new way of relating to the source.

The effects of these changes in materiality or in the cultural device concern the new forms assumed by the reader-historian when engaging with books or printed documents, for “[...] although the printed book inherited the basic structures of the

manuscript book [...], whatever technique was used to produce or reproduce it introduced innovations that profoundly altered the reader's relationship with written material" (Chartier, 2014, p. 113 - translated by the author from the Brazilian edition). It thus becomes a copy, and this copy must ensure authenticity and reliability in relation to its content and provenance. Moreover, other scholars point out that, beyond this concern, organoleptic properties are lost, and these are considered indispensable for the treatment of the historical source.

On this point, Roger Chartier (1988, 1991) reiterates the importance of the materiality of the source. Overall, the digital copy establishes itself as a new materiality, and the way information is retrieved from digital sources—"especially name-based searches"—creates a false impression of comprehensive retrieval, which may neglect many terms not selected or used in the search process (Almeida, 2011).

The materiality of the script source is used as a record of human action. The ways of recording have changed and will continue to change (Belo, 2008), as technological advancement will not cease or recede. It is therefore important to document the physical characteristics of the medium, an aspect that may serve as the basis for numerous interpretations of a historical period, a society, modes of production, consumption, and ways of doing and being over time.

Technological change is a characteristic of humanity, which is constantly evolving and naturally comes to implement easier ways of carrying out or producing a variety of procedures, leading successively to the circulation of new technologies. "There prevails among us the sad neglect" of preserving old records, to use an expression by Antonio Lobo (1901), when referring to the provision and encouragement of women's education and reading in the State of Maranhão at the dawn of the Republic. This reflection underscores the importance of preserving past media without disregarding their context and without arbitrarily measuring their simplicity in comparison with present-day practices and customs. After all, it should be remembered that every existing medium once occupied a prominent position and was innovative within a given historical context (Castro; Silva; Castellanos, 2011).

With confidence in technological innovations, the printed editorial object became predominant in the fifteenth century. Lucien Febvre and Henri-Jean Martin, in *The Coming of the Book: The Impact of Printing 1450–1800* (this study is based on the 2019 Brazilian edition of this book), point out the transformation in the processes of production of both the manuscript and the printed book at that period. Darnton

(2008), however, argues that the form of the book already existed prior to Gutenberg, and that the same notion of what constituted a book was preserved: a gathering of quires, bound and protected by a cover, with margins and pages. The culture of preserving the material supports of thought neither prevailed in the past nor prevails today, since concern for preservation has historically centered on the intellectual content produced by the author. Materiality is simply disregarded when works are copied into new media. The original—which ought to be preserved—is forgotten, as if the production of meaning were possible even when dissociated from its material form. As previously stated, “forms produce meaning” (Chartier, 1991, p. 179).

In *The Adventure of the Book* (translated from Brazilian title edition *A Aventura do livro*), Roger Chartier (1999) characterizes the book according to its form, circulation, periodicity, geographical scope, mode of production, and format. The first characteristic encompasses the formal and technical aspects of typographic composition, taking into account material and spatial zones: typefaces, paper quality, the size or dimensions of the work, typographic and/or artistic highlights, the value attributed to the work, the opening of sections, pages, dedications, recommendations, the publisher’s or printer’s marks. The second refers to its circulation, which includes the modalities of acquisition: purchase, donation, exchange, copying, lending, and disposal.

As for the condition or saturation of the object this characteristic concerns the physical degradation of the document resulting from biological, chemical, or physical action: deterioration, conservation, and legibility. Geographical scope refers to whether circulation is local, state-wide, national, or international. Periodicity may be monographic (edition, volume, print run, copy, original) or serial (daily, weekly, biweekly, monthly, annual, or continuous publication). Regarding modes of production, books may be manuscript, printed, or digital—depending on the recording technique employed. As for format, this characteristic corresponds to writing supports: clay, papyrus, parchment, paper, or electronic media. In historical research, these materialities require an examination of the production of meaning, since “[...] this embodiment of the text in a specific materiality carries the different interpretations, understandings, and uses attributed to it by its various publics” (Chartier, 1999, p. 18 - translated by the author from the Brazilian edition).

Historians in the field of the history of the book, reading, and libraries have sought to understand how books were produced and reproduced in different periods,

as well as their processes of distribution, circulation, and consumption. From a historiographical perspective, scripts themselves demonstrate that little attention has been devoted to their preservation or conservation. This is particularly significant given that, regardless of the period or era, the media used to record information are subject to deterioration—even in the case of digital devices, which become obsolete when they are no longer incorporated into newer media technologies. According to Fábio Chang de Almeida (2011, p. 16 - translated by the author from the Brazilian edition),

Digital documents are characterized by the dissociation between their physical support and their informational content. As a result, the physical medium can be discarded while its content is maintained on a new support. The extremely rapid evolution of information technology renders physical information carriers obsolete within a short period of time.

Some of the reasons for the lack of protection and safeguarding of bibliographic materials in a historical context are even more evident, such as the absence—particularly among public administrators—of a clear understanding of the concept or what constitutes a document and of its importance. As a result, the effective enforcement of preservation laws is not ensured (it should be noted that, even today, this understanding has not been fully consolidated). Many historical documents continue to suffer from the lack of implementation of policies aimed at preserving or conserving the original record. Concern is often limited to producing copies in other formats, neglecting—even if unintentionally—the preservation of the original document itself. Another reason lies in the ephemerality of the medium, since clay, papyrus, parchment (or even electronic media) are easily destroyed when exposed to natural phenomena (such as earthquakes<sup>5</sup> and floods) or human actions (like wars, fires, and invasions<sup>6</sup>).

It is also common to prioritize copies produced in contemporary or supposedly innovative formats, underestimating the originals because it might be outdated or obsolete. This is very much the case in the present period, as the digitization of

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<sup>5</sup> The origins of the Ajuda Library date back to the fifteenth century, when it was known as the Royal Library, its former designation. Installed from the sixteenth century onward in the western tower of the Paço da Ribeira, it was substantially enriched by King João V, but lost most of its valuable collection in the 1755 earthquake. It was subsequently reinstalled in annex buildings of the Paço de Madeira (the Real Barraca), in Ajuda. Ajuda Library. Available at: <https://bibliotecaajuda.bnportugal.gov.pt/apresentacao.htm>. Accessed April 17, 2025.

<sup>6</sup> The Library of Alexandria suffered a major fire in 48 BCE, when the Roman general Julius Caesar ordered an attack on the city. In the second century, Alexandria also experienced popular uprisings that ultimately destroyed much of its heritage. Library of Alexandria. Available at: <https://www.todamateria.com.br/biblioteca-de-alexandria/>. Accessed April 17, 2025.

historical documents—given their potential degradation caused by physical agents (light, ultraviolet radiation, fluorescent lamps), chemical agents (dust, humidity, gases), or biological agents (microorganisms, cockroaches, wood-boring insects, termites, silverfish)—is presented as urgent and as a necessary solution to prevent their disappearance.

However, this process of transposing originals into copies—whether scroll, parchment, manuscript, printed, or electronic—does not constitute the only solution and ultimately gives rise to other practical and theoretical problems, particularly when historiographical interpretation is at stake, since materiality asserts itself as a transmitter of meaning. As Roger Chartier (1991, p. 181 - translated by the author from the Brazilian edition) warns: “[...] there is no text outside the medium that allows it to be read (or heard), and there is no understanding of any script that does not depend upon the forms through which it reaches the reader.” As a consequence of this lack of caution, or even of lack of awareness regarding the loss of information, many records over time have been lost, looted, stolen, burned, discarded, or abandoned.

It is also known that, for example, at the end of the 19th century, more precisely in 1894, many books from the Public Library of Maranhão were thrown into a bonfire and burned simply because there was no place to house them in the library. Likewise, many items were stolen or lost during transportation by cart. It is a tragic reality when cases similar to that of the Maranhão Public Library continue to emerge in the present day (Castro; Silva; Castellanos, 2011).

Lucien Febvre and Henri-Jean Martin, in *The Coming of the Book: The Impact of Printing 1450–1800*, present a seminal study on the emergence of the book. In this book, the authors highlight the processes and stages carried out by printers in the production of the earliest printed works known as incunabula. They also emphasize the loss of many of these works, which, at the time of their creation, were not recognized for the richness they would later represent. Incunabula are considered rare works because it is possible to identify in them the earliest typographical errors, the movable types used in printing, the quality of the paper, the size, and the editorial specifications characteristic of the period, such as capital letters, notes, bindings, and illuminations—services commissioned and handcrafted by *ad hoc* specialists.

What became of these items? The simple answer is not always disturbing: time erased them. Printing continued, and copies were produced with improved finishes. More legible texts, higher-quality paper, and bindings enhanced by modern

refinements established a new standard and created a distinction between the outdated and the contemporary. This “old” material, neither today nor in the past, has been regarded as something worthy of the investment of effort, time, and resources for its maintenance. Thus, time itself becomes the most convenient explanation for the lack of proper care and preservation of publications. The copy—resulting from successive technological transformations and developments—also obscures the importance of the original document.

The belief that mass publication guarantees the advancement and survival of works has not proven to be a consistent premise. Works are lost, deteriorated, or even deliberately destroyed, as occurred with the collection of the Public Library of Maranhão at the end of the 19th century. Yet we must still ask what has been done—beyond laws, ordinances, and guidelines—to ensure the preservation of and access to written cultural heritage. One current option has been the digitization of manuscript or printed collections held in public archives and libraries.

There is, in fact, a movement that seeks to minimize the impacts of the destruction of educational bibliographic heritage, whether through safeguarding and protection or by adopting processes that convert manuscript or printed collections into a new materiality accessible in virtual environments. Just as our predecessors were unable to guarantee the survival of traditional supports, digital documents must likewise have their long-term survival ensured—while simultaneously safeguarding the preservation of the original collections.

Despite this, other aspects also influence historiographical practices, since the historical document possesses its own nature. When analyzing a historical source, not only its content matters, but also the contexts in which the object of research circulates. Thus, the historian is concerned with elements that may initially appear secondary or irrelevant—yet numerous studies demonstrate the importance of materiality in the reception and consumption of the information under analysis<sup>7</sup>. According to Chartier’s studies (1988, 1991, 1994, 1999, 2012), the following questions remain: what kinds of connections does the historian establish with the past? In what ways can these connections be constructed?

The materiality of a written work is not described solely in its formal aspects, such as the cover, pre- and post-textual elements, format, size, and illustrations.

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<sup>7</sup> Particular mention should be made of Chartier’s works (1988, 1991, 1994, 1999, 2012).

Translators mobilize their textual repertoire, and editors structure the work according to the accessibility needs of the target audience. Proofreaders and copy editors punctuate, replace words, introduce alternatives, insert notes, and adapt the language to the target audience, while maintaining the meaning conveyed by the text. Scribes and censors, in turn, have likewise left their marks on texts that have since been converted into historical sources (Chartier, 1999, p. 12).

According to this author, ensuring the reliability, authenticity, and integrity of the document is of supreme importance. The historian examines documentation trusting in the document's veracity and in the certainty that digitization has been carried out in its entirety, without partiality, and with the legitimacy of the information preserved—free from omissions or interpolations. Bibliographic description must also guarantee faithful representation, enabling the researcher to access the constituent elements of the source, as well as its state of conservation, type of deterioration, texture of the medium, changes in the paper's coloration, provenance, series, and the documentary fonds to which the collection or item belongs.

### **3 Historical research and the restrictions of the digital world**

According to Éric Brasil and Leonardo Fernandes Nascimento (2020), the presence of digital tools in social, economic, and educational relations has become increasingly frequent. In the historiographical field, the incorporation of digital resources is no different. Digitized collections, digital newspaper archives, and institutional repositories now provide researchers with remote access to informational resources concerning educational bibliographic heritage. These include important documents such as Provincial Presidents' reports, which contain sections presenting data on public instruction, government actions, and budgets; laws and regulations regarding the creation of schools and the organization of the educational field; notebooks and schoolbooks, among other objects of school material culture.

Digital tools are instruments that employ new technologies to integrate image, sound, and text in order to support activities and ensure flexibility, integration, connectivity, and reliability. The creation of bibliographic collections throughout human history has gone through multiple transformations and, according to Roger Chartier (1994), André Belo (2008), and Robert Darnton (2008), such changes will continue to take place. Lot of studies reveal the use of script supports from earlier eras—materials

now unimaginable—such as palm leaves, shells, seeds, clay, honey, and other instruments characteristic of more ancient times. The development of these materials occurred primarily due to the availability of natural resources. Migration to other media took place gradually, as part of an evolutionary process marked by change, opportunity, and investment. Such investments enabled the production of the book (in papyrus or parchment form), which would revolutionize earlier formats such as the scroll or codex. According to Robert Darnton (2008), more recently the emergence of digital media has imposed specific ways of relating to texts through a screen.

According to Fábio Chang de Almeida (2011, p. 19 - translated by the author from the Brazilian edition), “[...] digitized documents are those that result from the process of digitizing pre-existing traditional documentation.” These characteristics present certain advantages over original scripts, since the material can be accessed remotely across a variety of textual genres, allowing information to be connected through interoperability among systems. The shift from physical form to digital format challenges historians to rethink how they “[...] research, write, present, and teach about the past” (Almeida, 2011, p. 19). These are significant transformations that require adaptations on the part of the researcher—adaptations that may be supported by meticulous and detailed source description.

Regarding the advantages of digital media, Fábio Chang de Almeida (2011) identifies seven positive characteristics: storage capacity, accessibility, flexibility, diversity, manipulability, interactivity, and hypertextuality or non-linearity:

- a) storage capacity – the ability to condense a large amount of data into a small physical space;
- b) online accessibility – unlimited access for a diverse audience;
- c) flexibility – the combination of still and moving images, sound, and text;
- d) diversity – a wide variety of resources and themes available;
- e) manipulability – the possibility of cutting, pasting, and reassembling text;
- f) interactivity – the promotion of synchronous communication;
- g) hypertextuality or non-linearity – allowing the reader to navigate through the text.

On the other hand, there are significant disadvantages that shape the ways in which historical records are viewed and used, potentially rendering documents unreliable. In an uncontrolled virtual environment, numerous problems frequently arise, such as ephemerality, legibility issues, variable quality, passivity, and inaccessibility.

Thus, “The digital world is a world of decontextualized fragments, juxtaposed and indefinitely recomposed, free from any necessity or desire to understand the connection that inscribes them within the works from which they were extracted” (Chartier, 2012, p. 124 - translated by the author from the Brazilian edition).

One of the challenges of 21st century historical research in online environments is ensuring the preservation of and continuous access to documents. Information retrieval is permeated by both certainties and uncertainties. When we locate informational items related to a research object, we describe the content and catalog the source. In this cataloging process, we seek to be as precise and attentive as possible. Here, attentiveness refers to the detailed description of data for subsequent identification and processing of information according to the form, structure, frequency, and medium identified. Such meticulous description is necessary because, although it is known that records are currently available it is not known for how long they will remain so.

Amid technological advancement, there is paradoxically a technical difficulty that must be considered when making a document available in digital format: if the platform does not ensure digital preservation, documents may be lost and unrecoverable in future research. In response, historiographical practice adapts to both the demands and the limitations inherent in internet-based research contexts.

Initiatives such as those undertaken by the Center for Study and Documentation in the History of Education and Reading Practices (Núcleo de Estudo e Documentação em História da Educação e das Práticas Leitoras – NEDHEL) have focused on research involving historical sources available in virtual environments. The primary concern is digital preservation, understood as an organizational management process encompassing the various activities necessary to ensure that a digital object can be accessed, retrieved, and used in the future through the Information and Communication Technologies (ICTs) available, with guarantees of authenticity (Gracio; Fadel; Valentim, 2013, p. 113). However, many documents available at a given moment may no longer be accessible in subsequent research endeavors.

Souza (2025) explains that, despite the benefits of digital media in virtual environments, texts in these contexts are characterized by ephemerality, rapid loss, accelerated production, and constant dynamism aimed at preventing documentation from disappearing. Undergraduate students in Library Science have been engaged in describing the information contained in the sources they research, focusing not only

on content but also on the materiality of the object. It is from these descriptive frameworks that representative information about the document is extracted or assigned: type of source, medium, whether printed, manuscript, or digital, means of access, number of pages, columns, paratextual elements, author, identification of errors, gaps, erasures, signatures, and dedications. The intention behind creating such descriptive frameworks is to support the researcher's work by recording data that are often overlooked during the digitization process.

Through the study of organoleptic properties, the aim is to add greater value to the work carried out at NEDHEL and, perhaps, to foster a closer connection with the object of study. There are technical recommendations regarding minimum requirements for digital preservation established by the Open Archival Information System (OAIS):

- a) maintain a preservation policy with clearly defined principles, guidelines, objectives, and methods;
- b) ensure reliability, authenticity, integrity, and full functionality;
- c) maintain context — safeguarding dependencies on specific software and hardware that define the digital object, considering the reasons for its production, its modes of distribution, and its links with other standard objects and open formats;
- d) maintain provenance — identifying the origin or source of the digital object, its chain of custody, and documenting its history of alterations through metadata for digital preservation;
- e) ensure recoverability — implementing and regularly reviewing a backup policy that prioritizes replication of the digital object in a separate physical environment and the combined use of different storage technologies, thereby ensuring reliable, integral, and secure access to and restoration of data over the long term in a sustainable manner (Barbedo; Corujo; Sant'Ana, 2011).

According to these authors, ensuring the reliability, authenticity, and integrity of the document is of paramount importance. When the historian examines documentation and places trust in its veracity, digitization must complete the process in its entirety, without partiality, ensuring the legitimacy of the information and the absence of omissions or interpolations. Bibliographic description must likewise provide a faithful account, granting the researcher access to the constituent elements of the

source: state of conservation, type of deterioration, texture of the medium, changes in paper coloration, provenance, series, and the documentary fonds to which the document belongs.

#### **4 Physical description and notes in digital documents:** between omissions and the librarian stewardship

In order to explain and illustrate the discussion of the object in its materiality and to identify the technical procedures employed by librarians to ensure the faithful representation of a work's manifestation, it is necessary to make explicit the nature of the item and the audience for which it is intended, so that its specifications may be accurately encoded in documentary language. In our practice, the focal point is on documentation commonly used by historians and available in digital environments, particularly in institutional repositories, collections included in rare books sections, and digital newspaper archives, given their historical or evidentiary value.

First, it returns to the point about understanding of the book proposed by Roger Chartier (1994) and Robert Darnton (2008) in *The Coming of the Book*, which defines it as a set of sheets gathered, bound, paginated, and protected by a cover. Its characteristics may be described according to its manifestation and its attributes. Manuscripts are understood as texts written by hand or typewritten. Inscriptions may appear on clay tablets, stone, parchment, papyrus, or other media, and may also include copies produced by computer (Ribeiro, 2009). These types of documents serve researchers who devote attention to details and particularities that are often overlooked when printed or manuscript publications are made available in digital format. According to the Anglo-American Cataloguing Rules (AACR2) and MARC 21, there is a specific area dedicated to physical description and notes, which will be focused on from now on.

Despite the importance of materiality, throughout my experience in historical research I have encountered gaps and obstacles not only in the retrieval of information but also in the absence of specific details regarding the physical aspects of the medium. If the form of a document interferes with the ways in which its content is assimilated, then its absence clearly reveals the fragility of research. On this matter, Fonseca (2007, p. 26, emphasis added - translated by the author from the Brazilian edition) states: "Although we consider insufficient the definition that restricts the book

to a set of *'printed gatherings,' we must analyze it in its material condition and not merely as a spiritual instrument*, as the great French poet Stéphane Mallarmé called it [...].” This prompts reflection on the approximations, understandings, and interpretations that may arise from the format in which a book presents itself.

In historical investigation, content and form carry equal weight. If we assume this to be true, why do many institutional repositories—responsible for safeguarding and disseminating information—provide transcriptions that are summarized or, worse, omit essential elements? In the vast majority of cases, repositories merely present or synthesize data concerning authorship or responsibility, titles and subtitles, place of publication, publisher, date, and pagination. When notes are included, they are often limited to indicating whether a bibliography is present.

Understanding that the librarian is the professional responsible for the treatment of informational media, Eliane Serrão Mey and Naira Silveira (2009, p. 1) explain that their work “[...] in simple terms, consists of organizing, processing, and disseminating recorded knowledge for different user communities, according to the interests, demands, and potentialities of each of these communities.” These professionals have at their disposal specific instruments that guide their practice. Such prescriptions establish the requirements for document description, which brings up the following question: why do most documentary representations limit themselves to transcribing only the first or second level of transcription? Why are the notes area and the physical description of the document often neglected?

Work and item are frequently used as synonymous concepts. However, it is necessary to distinguish them in order to ensure fidelity in description. According to Eliane Serrão Mey (2003, p. 7 - translated by the author from the Brazilian edition),

[...] A work is an intellectual or artistic content in its own right—that is, a complete body of intellectual or artistic creation, or a record of knowledge, regardless of the support or medium in which it is embodied. It is distinct from the item, which is the physical or digital carrier that contains one or more contents. While the work is an abstract entity that may be reproduced across different media, the item is concrete, even when it exists in virtual form.

It is cataloguing—or descriptive representation—that has been dedicated to specifying, translating, and explaining the particularities of documents. According to Ribeiro (2009, p. 119 - translated by the author from the Brazilian edition), “[...] descriptive cataloguing is almost entirely a transcription of the elements that appear on the item. Even printing errors or other mistakes are transcribed as they appear, with

attention drawn to them through additions or explanatory notes.” According to Lucy Luccas and Dione Seripierri (1995) and Antônia Ribeiro (2009), the process of bibliographic description must take into account five fundamental aspects in order to ensure the authenticity of the document:

- a – Integrity, which refers to honesty and reliability in description. The description must be faithful to the item. Doubtful information should be avoided or clearly indicated, including explicit notes regarding uncertainties or omissions. This task should be carried out at the time of digitization—since once digitized, the work loses direct contact with its physical characteristics, thereby preventing historians from checking the specific features of the editorial product *in loco*.
- b – Clarity in the use of appropriate terminology according to the target audience, ensuring that specific or general terms are understandable to the reader. The use of overly ornate language is of little value if it cannot be semantically understood. Anachronisms should be avoided.
- c – Precision, which in this context means avoiding ambiguity and employing clear language so that the reader understands precisely the meaning of the described term.
- d – Logic, prioritizing the information to be described according to its degree of importance, while maintaining coherence and standardization in the descriptive structure.
- e – Consistency, meaning the maintenance of a standardized pattern in description. Capital letters, bold type, entries, and notes should always appear in the same place. This facilitates technical reading and rapid identification. In the case of the catalog record, for example, the areas reserved for physical description and notes correspond, respectively, to AACR2 (areas 5 and 7) and MARC 21 (fields 3 and 5).

It is not the intention of this study to provide a detailed explanation of cataloguing codes or of machine-readable bibliographic representation. Rather, the aim is to draw attention to the peculiarities of the item and to highlight, among its attributes, the “physical description area” and the “notes area,” based on experiences drawn from the historian’s investigative practice, which frequently encounters gaps and omissions (intentional or not) in digital documents made available online by archive and memory institutions.

Likewise, this discussion seeks to highlight a practical difficulty noted by Roger Chartier (1994), André Belo (2008), and Robert Darnton (2008): a certain passivity (not in a pejorative sense, but simply indicating that in some situations there is limited use of the notes area) on the part of librarians when handling historical documents, occasionally overlooking the target audience for whom the resource is intended. As mentioned above, many research resources are limited to highly summarized descriptions. The historian, however, must understand in which item the information circulates and its particular characteristics—features often omitted in the conversion of printed documents into digital format. It is therefore reasonable to expect access to the document in its entirety, enabling a more comprehensive view and understanding of the work.

The most recurrent details in item description concern collation: “[...] the term refers to the various physical aspects that describe a book, such as the number of pages or volumes, illustrative material, and size” (Lehnus, 1971, p. 25 - translated by the author from the Brazilian edition). Since the present study analyzes the descriptive representation of historical documents, it should be noted that codices were named according to the number of folds made in the sheet: in plano (folded once), in folio (twice), in quarto (four times), in octavo (eight times), and so forth. Descriptions may also include height in centimeters, number of leaves, illustrations, dimensions in centimeters or millimeters, and plates.

The notes area, in turn, constitutes “[...] any aspect or characteristic of the book [that] may be brought to the reader’s attention by means of notes” (Lehnus, 1971, p. 28 - translated by the author from the Brazilian edition). Rare works presented under the expressions—manuscripts, books, periodicals—use the entirety of their manifestation as support for description. Over time, the structuring of information adapted to the evolution of the publishing world, relying primarily on the title page or its verso. The colophon as the sole main source of information is not sufficient to ensure the integrity and completeness of the record.

In the notes area, librarians can record information such as color and texture, or even odor—singular characteristics that may indicate levels of deterioration and usability of the document, or reveal prevailing conservation practices (or their absence). In the case of odor, this feature may suggest that the document is not suitable for consultation and that it is affected by physical, biological, or chemical agents.

Secondly, autographs, signatures, scribbles, annotations, or dedications by figures from the cultural, economic, or political spheres may be recorded. When compared with the particularities of the item, such elements may be associated with its format and editorial qualities, as well as with ownership history or patterns of circulation. An example may be found in Belo (2008), who discusses colportage literature and cordel literature (a genre of regional popular literature) aimed at individuals with limited purchasing power. Bindings were made with simpler materials, and content was condensed, thereby revealing social stratification. In this type of literature, it is possible, according to Darnton (2008), to establish a sociology of the text—that is, to understand how ideas reverberate in society through the material forms that circulate within specific places, historical contexts, and social classes.

It is important to situate that a single work may assume different expressions (Painting, Sculpture, Architecture, Music, Literature, Dance, Cinema, Photography, Comics, Video Games, Digital Art, among others) and different manifestations (relating to a specific publication and binding—cover, colors, fonts, spacing, publisher, illustrations, and other typographic features—depending on the choices made by the editorial team, as in the case of a book titled *History of the Book* published by X). The item, in turn, is the individualized object (the specific document) that will be described. It is the item that the librarian uses as the basis for detailing the areas of physical description and notes.

The reduced dimensions of the format (approximately 9 inches, in octavo) may significantly influence the reader's experience. Limited margin space may restrict the inclusion of readers' annotations or editorial notes, thereby affecting interaction with the text. Furthermore, font size and line spacing in compact formats may impact reading ergonomics, particularly for regular readers. The reduction of these elements may induce visual fatigue, whereas a larger format (in quarto, approximately 12 inches) may optimize and enhance comprehension of the content.

Certain notes were found in documents retrieved from the National Library (Biblioteca Nacional – BN), the Public Archive of Maranhão (Arquivo Público do Estado do Maranhão – APEM), and the Benedito Leite Public Library (Biblioteca Pública Benedito Leite – BPBL). Among these institutions, a slightly more detailed description of the loose documents in the APEM collection was identified. The physical description area, as in the other institutions, generally provides only details concerning number of pages or leaves and item size. In the notes section, however, it is possible to find

information indicating: manuscript text, typewritten text, copy, carbon copy, photocopy, transcription, computer-printed text, revision, adaptation, continuation, target audience, usage restrictions, restored works, handwritten marginal notes, combined notes regarding the original, form of addition, price, and periodicity. Such information points to a specific historical moment, to the type of technology available at the time, and to the skills of individuals dedicated to circulating certain informational, journalistic, or even defamatory content.

On the other hand, observation of the practices adopted by the aforementioned institutions reveals inconsistency in the presentation of notes. In most cases, the information is sparse, reflecting a lack of standardization, completeness, consistency, and logical structure. It is worth recalling that librarians must exercise sensitivity in the cataloguing of informational items. A precise eye and skill in identifying details qualify the document and render it unique, thereby generating interpretative possibilities for the historian who no longer has access to the original document.

In this sense, it is essential to consider the conditions imposed by historical research in digital environments and consider dynamic possibilities that allow the historian to apprehend the work, regardless of the specific item accessed.

## 5 Conclusion

The discussion surrounding historical research in digital environments, associated with the descriptive representation carried out by librarians, reveals connections that must be maintained. Librarians, when engaged in technical processing—particularly of historical documentation—must cultivate a sensitivity that enables them to recognize the physical peculiarities of the document, as well as the target audience for which the item is addressed.

Several conclusions may be drawn from this association. First, the importance of materiality in historical research becomes evident. Without it, the historian's practice and experience is limited to what is immediately accessible. Scientific creativity cannot be fully explored. One might even argue that there is a conditioning effect on the ways in which the content is interpreted.

Another observation concerns the technical resources or instruments of the librarian's *métier*. These are provisions that indicate what information should be added about the item in which the object circulates and how such information should be

recorded. Although these normative instruments have not been explored in depth in this study, it should be noted that they are essential resources that help librarians maintain standardization, consistency, and logical coherence in description. Following the earlier reference to the Anglo-American Cataloguing Rules (AACR2) and Machine-Readable Cataloging (MARC 21), it is reiterated that these are important standards for the cataloguing and description of bibliographic resources, including the areas of physical description and notes. It is observed, however, that although this operation is part of bibliographic and archival practice, it is still neither sufficiently consistent nor adequate to guarantee the historian's full apprehension of pertinent information, thereby indicating a gap in information representation.

Finally, a sobering reality emerges: in the vast majority of cases, items comprising rare works collections and made available in digital format—along with their notes areas—are insufficiently explored. Because they are restrictive, there is a tendency not to highlight the physical and organoleptic characteristics of the document. The notes area for historical documents available in digital environments cannot be treated in the same manner as that of current bibliographic items. There are particularities that the historian must bear in mind in order to understand the object in its materiality.

Item description often lacks consistent, standardized, and logical structuring. When notes are provided, they are typically limited to indicating that the manifestation includes a bibliography or an index—scant data that do not represent the document in its entirety. This reality generates a series of scientific difficulties for historiographical practice, since without access to the original document, the historian cannot fully grasp the materiality of the item originally created in manuscript or printed form, in codex format, and now circulating in digital form. As a consequence, the historian may fall into the interpretative traps mentioned by Roger Chartier (1994), who argues that the approaches and interpretations of an object depend upon its materiality.

Representational instruments must therefore be developed according to the target audience and in alignment with historiographical operations compatible with appropriate levels of detail. Contemporary or digital books generally rely on first-level descriptions. For special materials, such as manuscripts and rare works, a more refined level of description is required—especially when the item is accessible exclusively in digital format.

It is thus fundamental to ensure the preservation of written culture in the forms in which it was created, at least those that currently exert influence on editorial production—namely, the book in codex format. To acquiesce to the destruction of books in their original form is also to adopt a restrictive and exclusionary view of the historical operations undertaken by researchers prepared to identify and relate details.

In order to ensure the faithful representation of items belonging to historical bibliographic heritage in digital environments, librarians must enhance their skills and competencies. Most items lack adequate description, including information about target audience and the nature of the documentation, which highlights the need for a shift in the posture of the information professional. Representation must take into account the physical characteristics of the document and include notes regarding authenticity and reliability, employing appropriate metadata resources and standards to ensure consistency and interoperability, thereby preserving and disseminating historical bibliographic heritage.

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#### **MINI BIOGRAPHY**

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