

Oltre le pagine.
A Digital Library and Virtual Exhibition
for the Promotion of Pop-Up Books

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ABSTRACT

This paper presents *Oltre le pagine*, a project combining a digital library and a virtual exhibition dedicated to pop-up and movable books. Three-dimensional books represent a distinctive editorial form in which narration unfolds through movement, space, and surprise. However, the material fragility and mechanical complexity of these objects make sustained consultation difficult in traditional library and museum settings.

The project addresses this issue by experimenting with the integration of cataloguing practices, multimedia resources, and online exhibition environments. The digital library, developed using Omeka Classic, organizes a curated selection of pop-up books through descriptive records enriched with demonstration videos, audiovisual documents, and related artistic resources. The structure is articulated into two main collections: one aimed at adult audiences, in which movable books engage with cinema, illustration, and cultural memory; the other dedicated to children's books, such as carousel books, paper theatres, as well as contemporary three-dimensional projects.

Building on the cataloguing structure, the project develops a virtual exhibition on the Artsteps platform, transforming the collections into navigable exhibition rooms. The transition from the bibliographic record to three-dimensional space allows the performative dimension of the pop-up book to become perceptible, offering alternative modes of access and cultural promotion.

The case study shows how digital curation tools and virtual environments can complement the digital library in documenting and disseminating interactive books, opening new perspectives for preservation, cultural mediation, and public access to such complex objects.

KEYWORDS

Digital library; pop-up books; virtual exhibition.

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1. Introduction*

Pop-up books and movable books represent a distinctive editorial form in which the book moves beyond the bi-dimensionality of the page, embodying a spatial and performative dimension. Through folds, interlocking elements, and movable structures, reading becomes an experience that involves gesture, vision, and surprise. This dynamic nature makes pop-up books complex objects to preserve, consult, and exhibit in traditional library and museum contexts.

In recent years, there has been a growing interest in movable books, both as tangible historical heritage of publishing, as well as a contemporary artistic experimentation. The history and bibliography of movable books have been extensively documented in pioneering studies (Haining 1979; Montanaro 1993). However, access often remains limited due to material constraints: repeated opening can damage paper mechanisms, while prolonged display can accelerate deterioration. At the same time, photographic reproduction cannot convey the movement and three-dimensionality that constitute the very essence of such books. Recent reflections on movable books as performative texts and mobile devices have also become part of a broader debate on movable texts and digital curation practices applied to the valorisation of interactive book objects (Crupi 2016; Kazeykina 2024).

In this context, *Oltre le pagine* explores digital approaches to the documentation and valorisation of pop-up books by integrating cataloguing description, multimedia resources, and virtual environments. The digital library enables the organisation and contextualisation of a selected corpus of works, while the virtual exhibition transforms consultation into an exploratory path capable of making the performative dimension of the movable book perceptible.

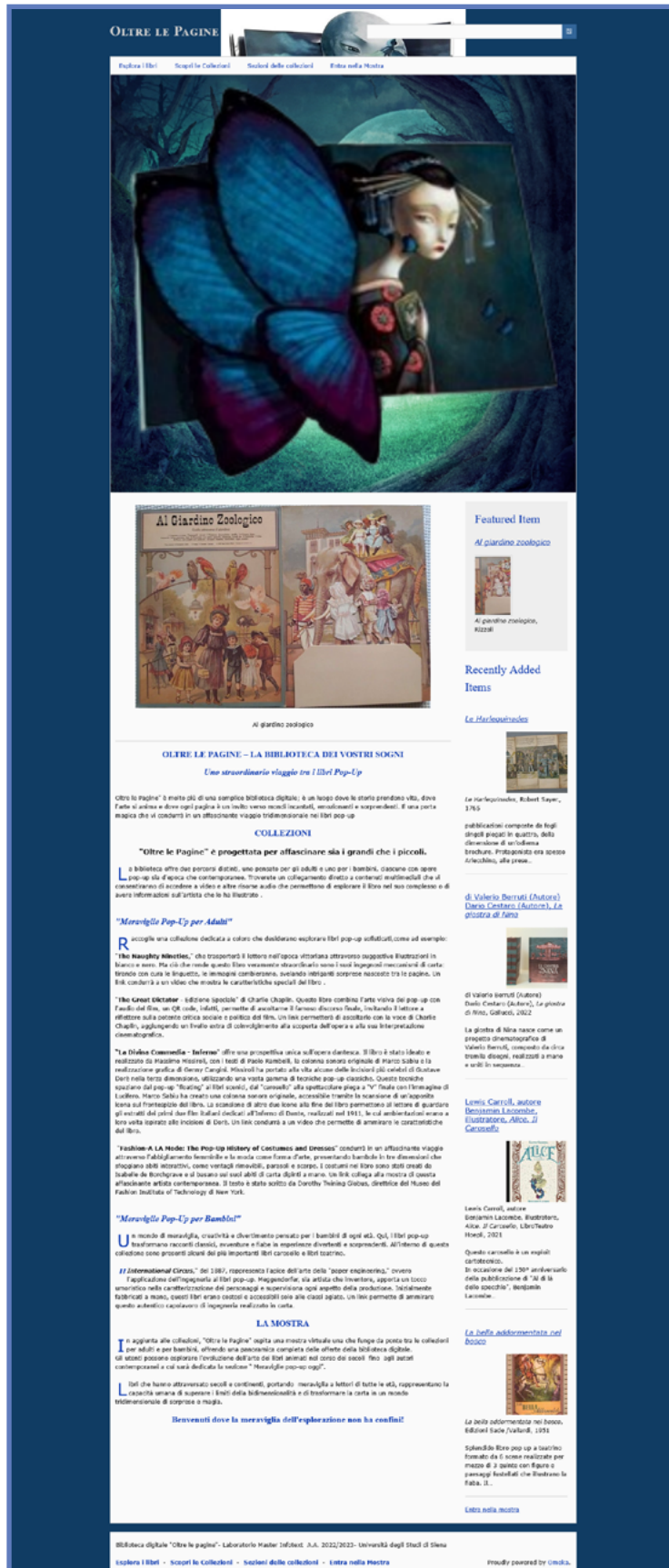
This paper presents *Oltre le pagine* as a case study of digital curation applied to interactive books, with the aim of reflecting on the possibilities offered by digital libraries and virtual exhibitions in the cultural mediation of complex book objects.¹

2. From the Digital Library to the Virtual Exhibition

The digital library *Oltre le pagine* was designed as an environment for the selection, description, and contextualisation of pop-up and movable books. Its aim is not to constitute a comprehensive repertory, but to develop a thematic collection that allows different expressive forms of the three-dimensional book to be observed, by relating editorial objects, multimedia resources, and their cultural contexts.

* The translation of this contribution, originally written in Italian, was carried out by the Autor and was produced in order to provide wider dissemination of the content to an international audience. *Oltre le pagine* (*Beyond the Pages*) was developed within the Digital Libraries module of the Master's programme in Informatica del Testo ed Edizione Elettronica at the University of Siena, as an experiment in tools and methodologies of digital curation applied to the enhancement of pop-up books. The websites were last accessed on 27 January 2026.

¹ The digital library *Oltre le pagine* is built with Omeka Classic, an open-source platform for managing and publishing digital collections based on descriptive metadata, and is available at: <https://www.grafoteca.com/popup/index.html>. The virtual exhibition *Oltre le pagine – uno straordinario viaggio tra i libri pop-up* (*Beyond the Pages – an extraordinary journey through pop-up books*) is developed on Artsteps, a web-based environment for creating navigable three-dimensional exhibition spaces, and can be accessed on the platform at: <https://www.artsteps.com/view/65983fae1cb79e7ee9951be7?currentUser>.



The platform chosen for the development of the library is Omeka Classic, an open-source system for managing and publishing digital collections, widely used within the field of Digital Humanities and employed in digital curation projects in library, archival, and museum contexts (Hardesty 2014; Salarelli 2016; Omeka Team 2023). Omeka Classic is used for the management of collections, the creation of descriptive records, and the hierarchical organisation of content (Fig. 1). The project adopts the Dublin Core metadata set as its basic descriptive schema, ensuring standardised bibliographic description and promoting interoperability and data reuse (Dublin Core Metadata Initiative 2020; Tomasi 2022). The information architecture is based on principles of enriched description and digital curation, in line with knowledge management models developed within the field of digital libraries (Ridi 2004; Ciotti 2023). This approach supports not only the discoverability of sources, but also their contextualisation and the construction of thematic and cross-cutting navigation paths.

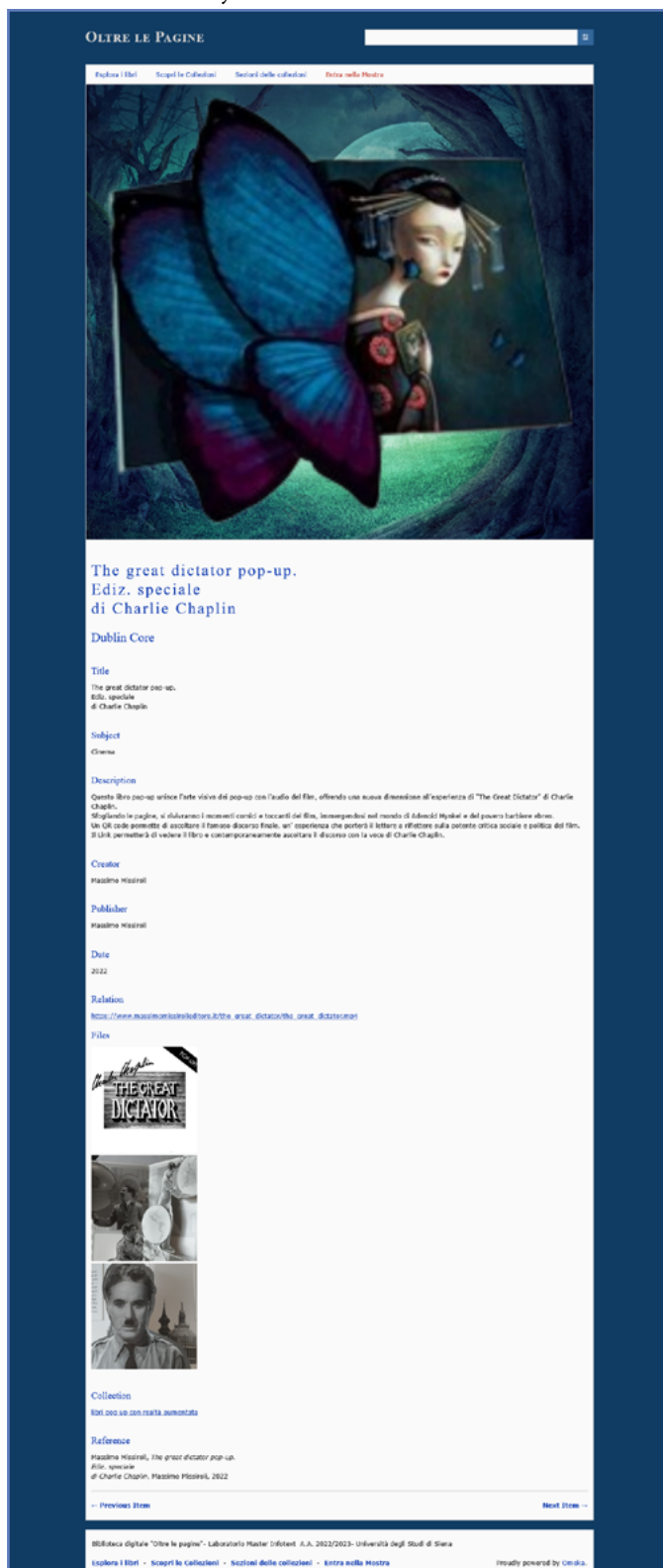
Each item is accompanied by an enriched bibliographic record, in which descriptive data are complemented by links to demonstration videos of the books' pop-up mechanisms, historical audiovisual materials, and related artistic resources (Fig. 2). These links are integrated directly into the record, enabling an immediate transition from the described object to its dynamic visualisation. This system of references makes it possible to overcome the limitations of static description, allowing users to observe the book in action and to explore its broader context.

The library is organised into two main collections, designed to reflect different narrative registers and audiences.

The *Meraviglie Pop-Up per Adulti* collection includes works in which the movable book takes on a scenographic and interpretative function. In this section, pop-up books

Fig. 1. Homepage of the digital library *Oltre le pagine*, developed using the Omeka platform.

engage with cinema, visual arts, illustration, and cultural memory. Volumes such as *La Divina Commedia. Inferno*, *The Great Dictator. Special Edition*, *Fashion-à-la-Mode*, and *The Naughty Nineties* show how three-dimensionality can interact with historical images, sound materials, and digital resources, transforming the book into a hybrid narrative device, midway between an editorial object and a micro-installation.



The *Meraviglie Pop-Up per Bambini* collection is dedicated to carousel books, paper theatres, and three-dimensional projects for children. Here, the movement of structures supports storytelling and playful exploration. Alongside historical classics such as *International Circus* by Lothar Meggendorfer, the selection includes contemporary projects such as *La giostra di Nina* by Valerio Berruti, in which the three-dimensional book connects with filmic and installation-based works, highlighting the continuity between paper engineering tradition and contemporary artistic experimentation. The dual structure of the library thus makes it possible to present the pop-up book both as a playful object and as an artistic and cultural device, offering an interpretative framework that highlights the variety of languages and narrative modes characteristic of movable books.

3. From the Digital Library to the Virtual Exhibition

The cataloguing structure of the digital library constitutes the starting point for the development of the virtual exhibition *Oltre le pagine – uno straordinario viaggio tra i libri pop-up*. The two main collections are transformed into corresponding exhibition rooms, dedicated respectively to pop-up books for adults and for children, while an introductory section guides the visitor through the historical and artistic evolution of movable books.

The exhibition is developed using Artsteps, a web-based platform for creating navigable three-dimensional exhibition environments, capable of integrating texts, images, and multimedia content within a configurable virtual space. A narrative voice accompanies the exhibition path, introducing the sections and guiding the visitor through the exploration of the content. The adoption of a digital exhibition platform alongside the digital library responds

Fig. 2. Example of a catalogue record for a pop-up book with Dublin Core metadata and links to multimedia resources.

to the need to make the spatial and performative nature of pop-up books perceptible. While the bibliographic record allows the object to be described and its features documented, the digital exhibition space enables it to be placed within a narrative path, fostering a form of engagement closer to the museum visit experience (**Fig. 3**).



Fig. 3. || Exhibition room of the virtual exhibition *Oltre le pagine*, created using the Artsteps platform.

Within the exhibition, each book is presented as an exhibit and linked to the multimedia content already integrated into the digital library. Visitors can thus move from observing the object to viewing its mechanisms in action, listening to sound materials, or accessing historical audiovisual documents. The exhibition thus becomes an interface that brings together cataloguing description, digital resources, and narrative structure, offering an active mode of content exploration. The integrated multimedia links also allow the visit to extend toward artistic, cinematic, and cultural contexts related to the exhibited works.

The transition from the digital library to the virtual exhibition makes it possible to experiment with a hybrid form of valorisation: on the one hand, the data organisation typical of the digital library; on the other, the immersive experience of exhibition. This transition represents one of the central aspects of the project, as it enables the exploration of new modes of access and cultural mediation for complex book objects such as pop-up books.

4. Technical Structure of the Project

The digital library *Oltre le pagine* does not simply organise collections of pop-up and movable books, but also hosts an introductory virtual exhibition entitled *Oltre le pagine: viaggio nel tempo tra le meraviglie pop-up*. The exhibition functions as a bridge between the collections intended for adult audiences and those for children, offering an overall view of the project and guiding users in exploring the available resources. The exhibition path proposes a diachronic reading of the evolution of movable books, from early historical experiments to contemporary productions, to which a specific section, *Meraviglie pop-up oggi*, is dedicated.

The project was developed within the Digital Libraries module of the Master's programme in Informatica del Testo ed Edizione Elettronica at the University of Siena. From this perspective, the digital library and the virtual exhibition do not aim to constitute an exhaustive repertory of movable books, but rather to offer an experimental case study that concretely demonstrates the possibilities offered by digital curation practices in the description, organisation, and valorisation of complex book objects.

From a technical and organisational point of view, the digital library was configured using the

BigStuff template, chosen to ensure a consistent presentation of descriptive records and clear navigation across resources. The hierarchical structuring of the collections was implemented through the Collection Tree plugin, which allows collections to be organised into typological subsections consistent with the curatorial criteria of the project.

The *Meraviglie Pop-Up per Adulti* collection is organised into sections dedicated to movable books and to pop-up books with augmented reality features. The *Meraviglie Pop-Up per Bambini* collection, on the other hand, distinguishes sections devoted to carousel books and paper theatre books. This structure highlights different narrative registers and expressive modes of the three-dimensional book.

The same principle of hierarchical organisation has been applied to the internal virtual exhibition, divided into three thematic sections: (1) *Alla scoperta dei Metamorphoses, Turn-Up Book e Harlequinades*; (2) *Girotondo tra carousel e scenic book*; (3) *Meraviglie pop-up oggi*. This structure enables progressive navigation across historical typologies and contemporary productions, maintaining coherence between the cataloguing architecture of the digital library and the exhibition path.

The integration of collections, subsections, and the internal exhibition makes it possible to create a fluid transition between bibliographic description and narrative path, offering an experimental model for organising content that combines digital cataloguing and exhibition curation for the valorisation of movable books.

5. Final Remarks

Oltre le pagine has experimented with a model of digital valorisation applied to a complex book typology such as the pop-up book, bringing into dialogue cataloguing structure and virtual exhibition path. The integration of the digital library and the virtual exhibition has made it possible to explore alternative modes of documentation and access to editorial objects characterised by three-dimensionality, movement, and material fragility, which are difficult to access in traditional library and museum contexts.

The digital library has provided a descriptive and organisational infrastructure for the selection and contextualisation of the works, while the virtual exhibition has introduced a narrative and spatial dimension capable of making the performative component of movable books perceptible. The distinction, and at the same time the interaction, between the cataloguing level and the exhibition level has ensured coherence in content management and enabled the experimentation of a form of digital curation oriented toward user experience.

The project has highlighted the role of digital curation practices in the cultural mediation of complex book heritage, showing how the integration of bibliographic description, multimedia resources, and three-dimensional environments can expand the possibilities for the preservation, interpretation, and dissemination of movable books.

While configured as an experimental case study, developed within a training context and not exhaustive from a collection perspective, *Oltre le pagine* aims to contribute to the reflection on how digital libraries and virtual exhibitions can cooperate in the valorisation of editorial heritage in which technique, art, and narrative intersect. Future developments may include the refinement of descriptive criteria for pop-up mechanisms, a more systematic integration of audiovisual resources, and the expansion of the collection, with the aim of making the navigation experience increasingly structured and meaningful.

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