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Between book and artwork: the intersection of Library Science and Museology in the descriptive representation of artists' books

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Abstract

Within the framework of Knowledge Organization, this article analyzes the connections between Library Science and Museology in the descriptive representation of artists' books, considering their hybrid nature as both bibliographic publications and artistic objects. The research is documentary, qualitative, and exploratory in nature, conducted through a review and comparative conceptual analysis of information representation models, particularly FRBR, LRMoo, and CIDOC CRM. The study discusses convergences, divergences, and asymmetries between bibliographic and museological approaches, highlighting the limitations and possibilities of these models in representing the material, contextual, and informational dimensions of artists' books. It concludes that transdisciplinary approaches and interoperable models can facilitate descriptions better suited to the complexity of these hybrid objects.

1.0 Introduction

This study analyzes, from a theoretical and conceptual perspective, the complementarity between Library Science and Museology in the descriptive representation of artists' books, taking as its starting point the recognition of their hybrid nature. Therefore, it comparatively examines conceptual models developed in each field, particularly FRBR, IFLA LRMoo, and CIDOC CRM, in order to understand how their descriptive structures converge, diverge, or can be articulated in the representation of these objects.

Artists' books straddle the field of art and the bibliographic universe, challenging traditional categories of description and demanding approaches that transcend disciplinary boundaries. The starting point is the premise that such works mobilize material, aesthetic, symbolic, and informational dimensions that are rarely fully addressed when considered

solely within a single disciplinary framework. In this sense, the problem guiding this study consists of understanding how the descriptive frameworks of Library Science and Museology converge, diverge, and can be articulated in the representation of these hybrid objects.

The research therefore proposes to reflect on possibilities for articulation between the two fields, with a view to constructing more comprehensive descriptions aligned with user-centeredness, promoting not only information retrieval but also the understanding of the aesthetic and documentary experience provided by artists' books.

This discussion can be situated within a broader debate on the relationship between libraries, archives, and museums (LAM—Libraries, Archives, and Museums). According to Rasmussen and Hjørland (2022), such institutions have historically constituted memory institutions, responsible for collecting, preserving, organizing, and making available different types of cultural documents. Although they have developed distinct professional traditions, institutional practices, and organizational tools, they share a common objective: to organize and make accessible the records of knowledge and cultural heritage. The authors further note that libraries traditionally focus on reproducible publications, while museums deal predominantly with unique objects and singular materialities. This distinction is particularly relevant in the case of artists' books, which often occupy the intersection between publication and art object. Since this article deals with artists' books —objects that straddle the realms of the museum and the library—it will not address archives, as, in principle, such institutions do not typically include this type of work in their collections, although there may be exceptions in specific contexts.

2.0 Research design

This research is a documentary study with a qualitative approach and an exploratory nature. It is a theoretical-conceptual study that employs a narrative literature review combined with a comparative conceptual analysis of information representation models used in libraries and museums.

The corpus consisted of technical documents developed by IFLA and CIDOC, specifically FRBR, LRMoo, and CIDOC CRM. These documents were examined as conceptual frameworks structuring the descriptive practices of their respective institutional domains.

The material underwent analytical and comparative reading, focusing on identifying conceptual convergences, divergences, and gaps between bibliographic and museological approaches to representation. The comparative analysis was conducted based on several central criteria, including: (a) the conceptual structure of the models, (b) the types of entities and relationships used in information modeling, (c) the treatment of the context of production and use of cultural objects, (d) the potential for interoperability between information systems, and (e) the suitability of the models for representing hybrid objects, such as artists' books. These criteria allowed us to examine how different disciplinary traditions structure the description and organization of cultural objects.

This analytical procedure also engages with the domain analysis perspective in Knowledge Organization, according to which different discursive communities develop their own ways of representing and interpreting informational objects, making it necessary to understand the epistemological contexts that guide each descriptive practice.

Furthermore, the methodological procedure involves a conceptual analysis of the models and categories used in the representation of information. This approach allows for a critical examination of the theoretical assumptions that guide descriptive practices in different institutional domains and supports the identification of the descriptive asymmetries discussed in this study.

3.0 Interconnections between Library Science and Museology: the centrality of the user

The literature in Information Science highlights a trend toward convergence between Library and Information Science, Museology, and Archival Science, particularly with regard to the organization and representation of information. The traditional system-centered paradigm tends to treat information as an objective and stable entity, whereas the user-centered perspective understands information as situationally constructed by the subject in specific contexts (Dervin 1998). This shift implies recognizing that representation is not neutral, but rather guided by cognitive and contextual tasks of search, interpretation, and use.

In the case of artists' books, this perspective proves particularly relevant, as the experience of engaging with them involves informational, sensory, interactive, and interpretive dimensions that go beyond a strictly bibliographic or museological description. Thus, the interplay between these two fields can contribute to a representation that is more attuned to the complexity of these objects, broadening the possibilities for access and understanding.

Recent literature on memory institutions also points to a convergence between libraries, archives, and museums, often referred to by the acronym LAM (Libraries, Archives, and Museums). As Rasmussen and Hjørland (2022) discuss, digital transformations and the expanded circulation of cultural resources have contributed to making the institutional boundaries between these domains more permeable.

In this context, conceptual models focused on semantic interoperability become particularly relevant. The Conceptual Reference Model (CRM) developed by the International Committee for Documentation (CIDOC), widely used in museum documentation and digital heritage projects, aims precisely to provide a common conceptual framework capable of harmonizing different metadata schemas and cultural information systems. By establishing a shared conceptual vocabulary, the model allows for the interoperable representation of information from museums, libraries, and other memory institutions.

In contrast, conceptual models such as the Functional Requirements for Bibliographic Records (FRBR) and the Library Reference Model (LRM), developed by IFLA, advocate a

structure focused on the organization and representation of bibliographic information based on entities, attributes, and relationships that reflect users' needs in the processes of searching for, identifying, selecting, and obtaining informational resources. These models introduce a relational perspective into cataloguing by emphasizing the links between different manifestations of a work and by facilitating conceptual navigation among bibliographic records.

As a result of the convergence between these two domains, LRMoo has emerged, developed jointly by IFLA and the CIDOC CRM Special Interest Group (CRM SIG), with the goal of expressing the IFLA LRM bibliographic model in an ontological structure compatible with CIDOC CRM. LRMoo expands bibliographic representation by shifting the focus from a description centered exclusively on the information resource to an approach oriented toward objects, events, and contextual relationships. In this way, it makes it possible to represent not only traditional bibliographic entities but also the processes of creation, production, materialization, circulation, and use of resources, bringing bibliographic description closer to the practices of cultural heritage documentation.

This expansion is particularly relevant for hybrid media, such as artists' books, whose understanding depends not only on the bibliographic identification of the work, but also on the representation of its material, aesthetic, and conceptual dimensions, as well as the artistic processes involved in its creation.

The convergence of these models highlights that the representation of complex cultural objects requires structures capable of articulating not only intellectual and bibliographic aspects but also the historical, material, and social processes associated with informational resources. This integrated perspective offers a particularly productive approach to considering the organization of artists' books in memory institutions, given that such objects straddle the bibliographic, artistic, and heritage domains.

User-centeredness has often been cited as a guiding principle for libraries, archives, and museums, particularly in the context of discussions on interoperability and access to cultural information. In the case of artists' books, this perspective becomes particularly relevant, since understanding the work depends not only on isolated bibliographic or museological data, but also on the user's ability to recognize relationships between materiality, the creative process, and the context of circulation. Considering different user profiles and modes of interaction with the object can, therefore, contribute to descriptions that are more sensitive to the complexity of these cultural artifacts and align with contemporary cataloging principles, according to which a description should facilitate not only the location of the resource, but also its identification, contextualization, and exploration.

4.0 Descriptive asymmetries in the information representation of artists' books

The descriptive representation of artists' books presents specific challenges when analyzed in light of recent changes in the field of cataloguing. Traditional cataloguing has been rethought in recent decades, especially since the development of the Functional

Requirements for Bibliographic Records (FRBR), which is not a standard but a conceptual entity-relationship model structured around user needs (IFLA Study Group on the Functional Requirements for Bibliographic Records 1998). By redefining entities such as work, expression, manifestation, and item, and emphasizing the relationships between them, the model shifts the focus from the record to the logical structure of the data and its functions of searching, identifying, selecting, and retrieving (IFLA Study Group on the Functional Requirements for Bibliographic Records 1998; Riva et al. 2017).

This shift, later revised and expanded by the IFLA Library Reference Model (LRM) and reinterpreted from an ontological perspective by the Object-Oriented Library Reference Model (LRMoo), represents a significant epistemological change by prioritizing relationships, entities, and processes over strictly normative cataloging. This shift moves the focus of description from collection control to conceptual modeling oriented toward representing the relationships among resources, agents, events, and contexts of use (Riva et al. 2017; Aalberg et al. 2024). However, even with such conceptual advances, the practical application of these models still faces limitations, especially when faced with complex and hybrid objects (O'Neill and Žumer 2018). In the case of artists' books, conventional bibliographic models may overlook dimensions such as materiality, interactivity, and the kinetic nature of the object, highlighting that documentary representation remains largely anchored in the textual tradition.

At the same time, museum documentation has developed its own standards, driven by initiatives such as CIDOC, aimed at representing artistic and cultural collections in the context of digital transformation (Padilha 2022). While library science focuses on authorial, editorial, and structural attributes, museology emphasizes technique, medium, three-dimensionality, provenance, and exhibition context.

Within the context of this museum documentation, CIDOC CRM proposes a modeling approach based on persistent entities and events, allowing for the representation not only of the static attributes of cultural objects but also of the historical processes surrounding them, such as creation, use, circulation, and transformation over time. This event-based approach makes it possible to document complex relationships between objects, agents, places, and historical periods, expanding the capacity for contextual representation in cultural information systems.

As Smit (1993) observes, each profession considers itself capable of handling hybrid documents, but rarely engages with the approaches of other fields, which limits the understanding of the object's complexity. This dissociation can also be understood in light of the institutional history of so-called memory institutions. Rasmussen and Hjørland (2022) highlight that, throughout the 20th century, a process of professionalization occurred that reinforced the separation between libraries, archives, and museums, consolidating distinct practices, methodologies, and professional training. This process contributed to each field developing its own systems of organization and description, often without conceptual integration.

In this context, descriptive asymmetries emerge, understood as the effects of normative and disciplinary choices that produce informational silences—that is, omissions or

reductions of constitutive aspects of the work depending on the framework adopted. Such silences do not result from technical flaws, but from epistemological frameworks that delimit what is considered relevant, recordable, and recoverable within the system, operating as conceptual filters that structure the intelligibility of the object.

When descriptive models prioritize traditional textual categories, artistic, experimental, and material dimensions may be marginalized. Thus, the divergences between bibliographic and museological approaches are not merely technical, but express distinct regimes of representation and different ontologies of the cultural object.

In an artist's book, aspects such as the choice of medium, the reader's interaction with the book, the construction technique, and the relationship between form and content can constitute essential elements of the work itself. Thus, models focused primarily on bibliographic identification may highlight certain informational aspects while obscuring relevant material, performative, and procedural dimensions.

The ontological perspective adopted by CIDOC CRM (CIDOC CRM Special Interest Group 2026) reinforces this understanding by treating cultural objects as entities whose identity and meaning are constructed through networks of historical and contextual relationships. In this model, documentation is not limited to the physical description of the object but includes information about its provenance, the agents involved, the circumstances of its production, and its institutional trajectories, highlighting that the representation of cultural heritage necessarily involves multiple layers of interpretation.

Hjørland (2002) argues that Knowledge Organization is inevitably guided by theoretical perspectives and specific domains, which implies that different interpretive communities describe the same object in distinct ways. Thus, the asymmetry between bibliographic and museological approaches can be understood as an expression of different epistemological domains and distinct discursive traditions that guide the construction of systems of representation, and not merely as a technical divergence.

In the case of hybrid objects, O'Neill and Žumer (2018) demonstrate that, although models such as FRBR offer conceptual gains in relational structure, their implementation often remains anchored in legacy structures, limiting the full representation of complex entities. This limitation becomes particularly evident when material, performative, or interactive attributes do not find an adequate correspondence in traditional bibliographic descriptive schemas.

In the museum field, the development of standards such as CIDOC CRM highlights a concern with modeling contextual and material relationships in a broader manner (Padilha 2022). However, such models do not always account for bibliographic attributes traditionally valued in cataloguing. This disconnect reinforces the hypothesis that the lack of dialogue between models can produce representational gaps, compromising the comprehensive retrieval and qualified mediation of hybrid cultural objects.

As Rasmussen and Hjørland (2022) argue, convergent institutions are those that combine different types of materials and seek to integrate documentary practices from distinct professional fields. The very debate on convergence between libraries, archives, and

museums within the field of Knowledge Organization indicates that none of these institutions, acting in isolation, is capable of fully representing the diversity of cultural documents. Thus, the integration of Library Science and Museology proves to be not only desirable but epistemologically necessary, insofar as the ontological complexity of the artists' books requires descriptive models capable of simultaneously articulating bibliographic, material, relational, and contextual dimensions.

Table 1 Conceptual models for information representation

Criterion	**IFLA FRBR (1998)**	**IFLA LRMoo (2024)**	**CIDOC CRM (v.7.3.2)**
Main domain	Libraries and bibliographic records	Integration of Bibliographic Information and Cultural Heritage in a Semantic Environment	Museums, cultural heritage, and museum documentation
Model type	Entity-relationship conceptual model	An object-oriented ontology compatible with CIDOC CRM, derived from the IFLA LRM	Event-oriented conceptual ontology
Objective	Define functional requirements for bibliographic records and improve information retrieval	Represent bibliographic resources as cultural objects in semantic networks, enabling interoperability with CIDOC CRM	Enable semantic interoperability among cultural heritage documentation systems
Central entity	Work	F1 Work, understood in relation to the processes of creation, expression, and manifestation	Entities related to events, objects, and agents
Main entities	Work, Expression, Manifestation, Item	Classes such as F1 Work, F2 Expression, F3 Manifestation, and F5 Item, integrated with CRM classes (E39 Actor, E7	Entity classes such as E1 CRM Entity, E2 Temporal Entity, E39 Actor, E22 Man-made Object

Criterion	IFLA FRBR (1998)	IFLA LRMoo (2024)	CIDOC CRM (v.7.3.2)
		Activity, etc.)	
Conceptual structure	WEMI hierarchy (work → expression → manifestation → item)	Object-oriented structure; replaces a rigid hierarchy with semantic relationships between classes and events	Ontological model with classes and properties
Key relationships	Work → Expression → Manifestation → Item	Relationships between bibliographic entities, agents, and events of creation, production, ownership, and transformation	Relationships between events, objects, agents, and contexts
Focus of the description	Bibliographic resources and their various forms	The complete life cycle of a bibliographic resource: intellectual conception, materialization, circulation, and historical context	Historical context, production, use, and provenance of cultural objects
Main applications	Library catalogs and bibliographic systems	Linked data, library–museum–archive integration, and the description of complex bibliographic objects (e.g., artists' books)	Museum documentation, cultural heritage, and digital humanities
Interoperability	Originally limited to the bibliographic domain	High semantic interoperability: formal alignment between IFLA LRM and CIDOC CRM	Strong emphasis on semantic interoperability among cultural institutions

Source: the authors

Based on this overview, it is clear that the models proposed by the two fields stem from distinct conceptual perspectives, even though they share the common goal of structuring and representing information about cultural objects. While models developed within the field of Library Science, such as FRBR and its applications in LRMoo, seek to represent bibliographic resources using a relational and ontological structure capable of linking works, expressions, manifestations, items, agents, and events associated with the lifecycle of information objects, CIDOC CRM, originating from the field of Museology, adopts an event-oriented ontological approach aimed at the contextual representation of objects, agents, places, and historical processes. Despite these structural and scope differences, the convergence between LRMoo and CIDOC CRM highlights opportunities for semantic integration between these domains, promoting interoperability among libraries, archives, and museums.

There is a gap regarding the difference in scope in context modeling. IFLA's bibliographic models focus on the intellectual and editorial structure of information resources, emphasizing the relationships between work, expression, manifestation, and item. LRMoo aims to bridge this gap by translating the bibliographic universe into an ontological structure compatible with CIDOC CRM, incorporating greater capacity to represent events, agents, and contextual relationships. CIDOC CRM, on the other hand, emphasizes events, agents, historical processes, and the contexts of production and use of cultural objects. This difference reveals a gap in contextual representation in bibliographic models, which tend to describe the resource in a more structural rather than historical or process-oriented manner.

Another gap concerns the representation of the materiality and artistic dimension of objects. While CIDOC CRM was designed to handle unique artifacts, cultural heritage, and museological processes, traditional bibliographic models were originally conceived for reproducible publications. Thus, hybrid resources, such as artists' books, experimental editorial objects, or works that straddle the line between document and art, do not always fit fully within the WEMI framework. In this regard, LRMoo makes a significant contribution by aligning bibliographic representation with a heritage perspective, enabling us to understand the artist's book simultaneously as an informational resource, a material object, and the result of creative and cultural processes.

Taken together, these gaps suggest that, although the models represent significant advances in the representation of cultural information, the integration of different heritage domains still requires conceptual and methodological efforts, especially in hybrid contexts that straddle the boundaries between libraries and museums. The emergence of LRMoo represents precisely a step in this direction, as it proposes a framework capable of integrating IFLA's bibliographic tradition with the ontological modeling of CIDOC CRM, offering new possibilities for describing complex objects, such as artists' books.

5.0 Conclusions and implications

Studies of bibliographic and museological models indicate that, although Library Science and Museology have their own traditions and descriptive tools, their approaches are not mutually exclusive but potentially complementary. The centrality of the user emerges in the literature as a unifying principle capable of guiding practices that are more integrated and sensitive to the complexity of artists' books.

Furthermore, the contemporary debate on LAM institutions highlights that libraries, archives, and museums share fundamental functions related to the preservation and organization of documentary and cultural heritage. Although they maintain distinct institutional identities, their boundaries are becoming increasingly permeable in the face of hybrid objects and digital environments.

IFLA's bibliographic models focus on the structure and relationships among bibliographic resources, while CIDOC CRM prioritizes contextual representation, including events, agents, and historical processes. This difference highlights limitations in the representation of context and materiality in bibliographic models, especially for hybrid objects. In this context, LRMoo represents an initiative to bridge these domains by expressing the IFLA bibliographic model in an ontological structure compatible with CIDOC CRM, thereby enabling greater integration among bibliographic entities, events, agents, and cultural contexts. Furthermore, differing disciplinary traditions hinder full conceptual interoperability between the models, which poses a challenge for data integration between libraries and museums.

It can be concluded that it is possible to integrate and adopt shared theories and practices without negating the specific characteristics of each field. The analysis demonstrated that the descriptive asymmetries observed between bibliographic and museological models stem not only from technical differences but also from distinct epistemological traditions that guide the organization of information in libraries and museums. The emergence of integrative models, such as LRMoo, reflects a trend toward crossing these disciplinary boundaries by proposing conceptual frameworks capable of bringing together different traditions of representing cultural heritage.

The articulation between the two fields, supported by theoretical foundations of Information Science, can contribute to improving the representation of these hybrid objects, enhancing their intelligibility and fostering more effective forms of access and information mediation. Reflection on descriptive asymmetries highlights the need for more flexible and interoperable models, capable of integrating bibliographic and museological attributes without reducing the ontological complexity of the artists' books. In this sense, LRMoo makes a significant contribution by bridging the gap between IFLA's bibliographic model and CIDOC CRM's ontological perspective, linking bibliographic entities to events, agents, and contexts of production, circulation, and use of cultural objects. However, the representation of these objects remains dependent on theoretical and methodological choices capable of critically analyzing which material, aesthetic, and conceptual dimensions are revealed or concealed by the adopted models. As a theoretical implication, the study reinforces the importance of transdisciplinary approaches in Knowledge

Organization; as a practical implication, it points toward a critical review of descriptive standards applied to hybrid cultural objects.

AI Usage Statement: This research used artificial intelligence for text review (ChatGPT) and translation from Portuguese to English (DeepL).

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