

Awareness of Predatory Journals and Open Access: an online survey among Italian Researchers

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ABSTRACT

This study investigates Italian academics' awareness, perceptions, and experiences of predatory publishing, a phenomenon recognised as a threat to research integrity and scholarly communication. An online survey of researchers affiliated with Italian universities and research institutes yielded 258 responses, which were analysed.

Results show that awareness of predatory publishing is high: almost half of respondents (47.9%) had discussed it with colleagues, and more than one-third had encountered it as authors, reviewers, or readers. Familiarity varies across dimensions, with predatory journals and spam emails being most recognised, and fraudulent websites and podcasts less so. 30% of participants reported personal experience of editorial misleading, mainly as authors, and 76% had received spam or phishing solicitations. Significant differences emerged by professional title and age, with senior researchers demonstrating higher levels of awareness and some training.

Most participants perceive predatory publishing as having a moderate or high impact on scientific integrity, but only half have received training in research ethics or use verification tools. Open-ended responses show concern about the “publish or perish” culture and the difficulty of distinguishing legitimate from predatory journals. The findings highlight awareness and vulnerability in the Italian academic publishing landscape.

KEYWORDS

Academic publishing; Predatory publishers and journals; Research communities; Editorial misconduct.

1. Introduction

The dissemination of research findings is a cornerstone of scientific progress. However, there is growing concern within academic communities about flaws and scientific misconduct affecting the scholarly publishing ecosystem (Frank et al., 2023). One of the most urgent issues is the increase in predatory publishers and journals (PPJs), which undermine research integrity by prioritising profit over scientific rigour (Shen & Shah 2023).

Predatory publishing refers to exploitative entities that imitate reputable scholarly journals but partake in unethical editorial practices, such as insufficient (or suspicious) peer review, misleading indexing claims, and aggressive solicitation of manuscripts (Manca et al. 2017; Shen and Björk 2015). These journals misuse the open access (OA) model, corrupting its original aim of democratising knowledge (Cortegiani et al. 2020; Clemons et al. 2017; Duc et al. 2020; Shamseer et al. 2017; Kumar et al. 2022).

The term “predatory” was popularised by librarian Jeffrey Beall (2012), who curated a blacklist of potential OA publishers and journals for their lack of transparency, editorial oversight, and scientific quality. From his perspective, the ideal model of open access academic publishing that requires an Article Processing Charge (APC) has been exploited by unscrupulous publishers: “the more papers a publisher accepts and publishes, the more money it earns” (Beall 2017; 2013). Since the closure of his blog Scholarly Open Access in 2017, the scientific community has debated the objectivity, reproducibility, and ethical implications of such lists (Koerber et al. 2020; Siler et al. 2021).

Despite attempts to replace Beall’s list—most notably with Cabells’ *Journalytics Academic*, which categorises journals according to transparency and editorial quality—there is still no universal consensus on how to define or identify PPJs (Kratochvíl et al. 2020). Moreover, Beall’s criteria exhibited several limitations: an English-language bias, the exclusion of non-OA journals, and an overreliance on individual judgment, all of which hindered cross-national comparability (Christopher and Young 2015).

Empirical analyses reveal that predatory publishing is a global issue, with different levels of prevalence and awareness across nations. The increase in predatory publications may indicate significant gaps in scientific evaluation and a mechanical dependence on journal lists for academic progression. This may indicate a failure to evaluate the quality of scientific outputs (Bagues et al. 2019). Furthermore, disparities in article processing charges (APCs) exacerbate inequalities among researchers and institutions, as fees vary significantly across reputable and questionable OA platforms (Teixeira da Silva and Al-Khatib 2021; Krawczyk and Kulczycki 2021). In the long term, Berger’s proposal is to promote authors’ information literacy to help them navigate the complexities of scholarly communication, supported by one-on-one consultations with librarians to help them critically evaluate journals and their bibliometric and bibliographic indexing (Berger 2021; 2017).

Against this background, the present study aims to assess awareness of predatory publishing within Italian academic communities and examine their attitudes and editorial practices regarding the publication of scholarly information.

2. Literature Review

Conceptualising predatory publishing

The term predatory publishing has developed significantly since its origin. Early analyses (Beall, 2012; Butler, 2013) identified it as a direct consequence of the OA business model, which introduced financial incentives that could compromise editorial integrity. Subsequent research broadened the definition to encompass various unethical behaviours, from false claims of indexing and fabricated impact metrics to fraudulent peer review and plagiarism (Clemons et al. 2017; Salehi et al. 2020; Kirilova 2021).

A recent effort to establish a consensus definition was proposed by Grudniewicz et al. (2019):

Entities that prioritise self-interest at the expense of scholarship and are characterised by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and the use of aggressive and indiscriminate solicitation practices.

Similarly, Linacre defined them as “deceptive and often fake journals giving the appearance of legitimate peer-reviewed journals by exploiting the Open Access model while using misleading tactics to solicit article submissions” (Linacre 2022, 11). These formulations emphasise the deceitful, profit-driven character of PPJs and their harmful effect on the credibility of scientific communication and academic stakeholders.

Researchers have also examined related phenomena, such as hijacked journals, legitimate journals cloned through fraudulent websites, and paper mills that mass-produce fabricated manuscripts for profit (Abalkina 2021; 2023a). Predatory conferences, closely linked to predatory journals, are also deceptive practices that deviate from scientific and ethical standards, representing “two sides of the same coin” (Cortegiani et al. 2020). The literature thus places PPJs within a spectrum of editorial misconduct that threatens research integrity (Anderson 2019; Manley 2019; Happe 2020). The lack of critical assessment of sources, due to poor information literacy and a system driven by speed and blind trust in search engine results, benefits phenomena such as predatory journals, “journals boasting high standards of scientificity” (Cavalletto et al. 2018), which exploit this appearance to publish content without proper oversight in order to receive payments. As analysed by Xia (2021), it is not isolated cases of misconduct that cause the vulnerability of the academic system, but rather a broader ecosystem of global structural inequalities in research funding capacity, incentives and evaluation systems.

Beyond definitional debates, several authors emphasise that predatory publishing exploits the structural vulnerabilities of academia, especially the “publish or perish” culture that pressures researchers to prioritise quantity over quality (Kurambayev and Freedman 2021). Consequently, scholars (especially early-career researchers) might be duped by deceptive invitations or lack the expertise to assess the legitimacy of journals. Awareness of predatory journals is typically linked to research experience, training, and disciplinary culture (Christopher and Young 2015; Manca et al. 2017). Although predatory journals are often associated with the open access (OA) model, the relationship between the two is complex. The OA model aimed to democratise knowledge and remove paywalls for readers (Pearson 2016), but the rise of APC-based business models has created opportunities for exploitation. Studies show a wide range of publication fees, from free-

to-publish community journals to expensive commercial OA outlets, which leads to confusion and ethical dilemmas for authors (Krawczyk and Kulczycki 2021; Teixeira da Silva and Al-Khatib 2021). Conflicts of interest in scientific communication are a systemic issue, driven by commercial interests and a culture that encourages authors to take shortcuts. However, De Fiore (2024) writes that these are less problematic than other concerns, such as guiding science towards collective benefit by strengthening the governance of relationships between institutions and businesses, and promoting this through critical education and shared objectives: “to improve the quality of scientific literature, we must also limit industrial influence on research and policy”.

Some publishers engage in questionable, aggressive business practices, such as rapid expansion, special issues, and peer reviews conducted in just a few days. These practices border on illegality and fall into a grey zone because they are not outright “fake publishers”—as they also publish quality research and are indexed in major databases, such as MDPI.¹ Several authors (Krawczyk and Kulczycki 2021; Shah et al. 2022) argue that the predatory label has unfairly stigmatized legitimate OA venues, creating a bias against open access itself. Consequently, some scholars advocate moving beyond the binary distinction between “predatory” and “legitimate” towards a nuanced understanding of misleading publishing practices that lie along a spectrum of transparency and quality.

2.1 The Italian context: research assessment and awareness

The Italian academic system shows a significant mix of actively supporting open access and heavily depending on bibliometric evaluation, which creates both opportunities and vulnerabilities related to predatory publishing practices. Initiatives have emerged to promote the Diamond Open Access publishing model, managed directly by academic communities, free for authors and readers, and an alternative to the “Gold Road” model based on APCs. One example is the one launched at the University of Bologna.² Another valuable contribution to a more sustainable and equitable future is promoting the “Green Road” model, which focuses on self-archiving in institutional repositories to increase the circulation and broader sharing of scientific knowledge. The University of Messina is a key proponent of this model,³ and the JISC database is a valuable tool for analysing publishers’ positions on open access repository deposit.⁴

To date, approximately 76% of public and private universities in Italy have signed the *Messina Declaration* (2004), which encouraged researchers to publish in open-access journals and to deposit their work in institutional repositories. Although repositories require more political support, open access has grown alongside further initiatives and infrastructure projects, such as OpenAIRE,⁵ international collaborations and new publishing models (Poltronieri et al. 2010). OpenAIRE, as an European Commission infrastructure, has reinforced the regulatory framework with guide-

¹ Paolo Crosetto. Blog. <https://paolocrosetto.wordpress.com/2021/04/12/is-mdpi-a-predatory-publisher/>. Accessed 20 Mar 2026

² <https://amsacta.unibo.it/id/eprint/8173/1/pubblicare-in-Open-Access-una-guida-pratica.pdf?>

³ <https://oa.unime.it/open-access/>.

⁴ <https://openpolicyfinder.jisc.ac.uk/>.

⁵ <https://www.openaire.eu/>

lines on research integrity, transparency, and publication quality standards. Predatory practices are indirectly countered by promoting reliable indices (e.g., DOAJ) and responsible research evaluation, even without strict legal regulation.⁶ Another perspective is the commitment to the *Berlin Declaration* on Open Access (2003),⁷ to which over 100 Italian institutions, including universities, research institutes, libraries, and foundations, have adhered. Although open access publishing has increased recently, this growth has mainly been propelled by the expansion of transformative agreements, which have also sparked concerns about their long-term sustainability and impact on the scholarly communication system.

Scientific research in Italy (conducted within universities and public research institutions) is governed by the Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca (ANVUR).⁸ This agency is responsible for assessing research quality, accrediting journals, and overseeing the national research evaluation exercises (Valutazione della Qualità della Ricerca, VQR) with lists of scientific journals based on international databases like *Scopus* and *Web of Science*, used as benchmarks for academic appraisal and for the National Scientific Qualification (Abilitazione Scientifica Nazionale - ASN) process. In recent years, ANVUR is aligning itself with the principles of the Coalition for Advancing Research Assessment (CoARA),⁹ which promotes qualitative, context-aware research evaluation and the responsible use of quantitative indicators. Nevertheless, high paper output and numerous citations do not facilitate meritocratic assessment in the academic system, which involves cumbersome recruitment procedures and state competitions and promotions influenced by personal connections rather than the actual value of research (Ciriminna et al. 2025). Moreover, the library system requires investment and development to respond to the challenges of digital transformation. There are considerable gaps between the skills required of librarians and documentation experts, and their current training remains inadequate (Pasqui 2021). Although this evaluation framework aims to standardise quality, it may inadvertently encourage opportunistic publishing behaviour. Pressure to publish, language barriers, inexperience, and poor mentoring for open access publishing often lead researchers—especially early-career scholars or those from underfunded universities—to target venues that promise rapid peer review, guaranteed acceptance, or misleading indexing claims (Richtig et al. 2018). Such dynamics open opportunities for predatory journals to infiltrate legitimate academic circuits while claiming to enhance accessibility and visibility. However, it cannot be simplified to just the idea of predatory journals or to unfairly labelling a journal. Teaching students to critically evaluate the grey area between low-quality journals and outright scams is important to prevent unfair discrimination against legitimate open access journals that charge APCs (unfortunately, some with costly business models). (Moncada 2025)

Empirical evidence indicates that awareness of predatory publishing remains fragmented in Italy. Unfortunately, the low publication costs — subsidised at up to 18 times lower than those of traditional journals — also attract researchers from prestigious institutions conducting publicly funded

⁶ Scientific Knowledge Production. https://ec.europa.eu/assets/rtd/srip/2024/ec_rtd_srip-report-2024-chap-03.pdf.

⁷ Berlin Declaration on Education for Sustainable Development; Learn for our planet: act for sustainability. 2022. <https://unesdoc.unesco.org/ark:/48223/pf0000381228>.

⁸ ANVUR – Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca. <https://www.anvur.it/it>

⁹ CoARA – Coalition for Advancing Research Assessment. <https://www.coara.org/>

research (De Fiore 2024). A study of 46,000 Italian researchers found that about 5% had published in potentially predatory journals, often because these outlets were included in recognised indexes such as Scopus, making it difficult for evaluators to distinguish journal quality. The findings emphasise how information gaps and overreliance on journal lists can distort academic incentives and harm research integrity in assessment systems (Bagues et al. 2019). However, similar analyses have not been conducted at the national level in Italy, despite isolated cases of Italian researchers being targeted by deceptive publishers (Cortegiani et al. 2019). A recent study by Morriello (2022) on retracted publications in Italy, as reported on the Retraction Watch website, has found around 800 problematic cases, particularly in STEM and open-access articles. Errors in publication, cases of fraud or ethical violations (e.g., plagiarism, data and image manipulation, and false peer review) are reasons for retractions that are not requested by the authors. This demonstrates that even the practices of legitimate scientific journals and database evaluation systems are not always able to prevent or promptly identify misconduct, and this is true across the global system.

In recent years, many positive initiatives have been undertaken to combat misleading publishing practices and diminish the spread of predatory journals, especially by sharing information and promoting a more informed and responsible publishing culture through guidelines, academic research, and preventative measures. Italian universities support various outreach activities, including academic publishing support offices such as those in the Università di Studi di Padova,¹⁰ the Bibliometric Office and Open Science Service in Modena and Reggio Emilia, which assess the reliability and quality of journals,¹¹ the Help Desk at the University of Florence,¹² and courses in training open access model, awareness, and institutional guidance on recognizing predatory journals organised by the University of Milan.¹³ The CNR - Commission for Ethics and Integrity in Research has initiated a continuous effort to provide researchers with updates and recommendations.¹⁴ The Italian Association for the Promotion of Open Science (AISA)¹⁵ and the Roars (Return on Academic Research and School)¹⁶ association have created resources on predatory publishing, including discussion forums that help raise critical awareness.

In this context, this paper aims to examine Italian researchers' awareness, perceptions, and experiences of predatory journals.

2.2 The European context: research assessment and awareness

Large-scale global initiatives and reports on “Combatting Predatory Academic Journals and Conferences”¹⁷ have been realised by a working group of international experts from the InterAcademy

¹⁰ Università degli Studi di Padova. <https://biblio.unipd.it/biblioteca-digitale/per-chi-pubblica/editoria-predatoria>

¹¹ Università degli Studi di Modena e Reggio Emilia. <https://www.pop.unimore.it/riconoscere-i-predatory-journals/>

¹² Università degli Studi di Firenze. <https://www.unifi.it/it/ricerca-e-innovazione/ricerca/scienza-aperta-ateneo/editoria-predatoria>

¹³ Università degli Studi di Milano. <https://openscience.unimi.it/predatorie/>

¹⁴ CNR – Consiglio Nazionale delle Ricerche. https://www.cnr.it/sites/default/files/public/media/doc_istituzionali/ethics/cnr-ethics-predatory-journals-revisione-2021.pdf

¹⁵ Associazione Italiana per la Promozione della Scienza Aperta. <https://aisa.sp.unipi.it/editoria-predatoria/>

¹⁶ Roar - Return on Academic Research and School. <https://www.roars.it/editoria-predatoria/>

¹⁷ InterAcademy Partnership (IAP). <https://www.interacademies.org/publication/predatory-practices-report-English>.

Partnership (IAP), translated into various languages, and followed by a programme of regional webinars in partnership. Awareness has become the central and most immediate response to predatory publishing because disinformation is a primary cause of vulnerability. This has prompted a collaborative effort among universities, scholarly communities, and open science organisations to raise the problem's profile, offering researchers practical tools and encouraging a more critical and informed publishing culture.

A recent study in Germany surveyed orthopaedic and trauma surgeons to assess their awareness of predatory journals. The results showed that only 39.9% of participants were familiar with the concept of predatory journals and knew tools for identifying legitimate journals, meaning significant gaps in their training. Authors with more publications in academic and research contexts demonstrated greater knowledge, which was also associated with academic seniority, research experience, and employment status (Maurer et al. 2021).

Research conducted during the pandemic shows that early-career researchers face the greatest challenges in academic publishing due to immense pressure to build a robust publication record and limited editorial experience. The risk of encountering predatory journals is heightened in two distinct scenarios: hijacked journals clone the identities and websites of legitimate journals, and awareness of such practices is low, particularly among the habits of early-career researchers (ECRs) (Nicholas et al. 2023). For these reasons, distinguishing trustworthy from deceptive publishing venues demands critical assessment and awareness-raising initiatives across all academic sectors. Perceptions of predatory journals vary significantly across countries, highlighting differences in awareness levels, definitions and countermeasures. If there is limited awareness of academic publishing and the risks posed by predatory journals, the integrity of scientific research is at risk (Martinino et al. 2024). The *Stop Predatory Practices* website (<https://www.stoppredatorypractice.com/>) is a valuable international contribution, with strong involvement from the Czech Republic. It aims to combat editorial predation by providing concrete tools, such as education, training and awareness campaigns, to strengthen the integrity of scientific communication, particularly among doctoral students and early-career researchers.

3. Materials and methods

Study design and participants

This study uses an anonymised online survey to assess Italian researchers' publishing habits and their awareness of predatory journals. The target group includes members of the academic and scientific community affiliated with Italian universities and research institutes.

Email addresses (n=580) were collected from publicly available web pages of universities (e.g., UNI-ROMA1,¹⁸ UNIROMA2,¹⁹ UNIROMA3,²⁰ etc.) and national research institutes (e.g., INAIL,²¹

¹⁸ Sapienza University of Rome. <https://www.uniroma1.it/it/pagina-strutturale/home>

¹⁹ University of Rome "Tor Vergata". <https://web.uniroma2.it/>

²⁰ Roma Tre University. <https://www.uniroma3.it/en/about-us/history-and-values/>

²¹ INAIL - Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro. www.inail.it

CNR,²² INFN,²³ etc.), mainly located in the Lazio region. The invitation was sent via institutional email from 30 June to 30 September 2023. Participation was voluntary and anonymous. A total of 258 responses were received, resulting in an overall response rate of 44%.

3.1 Survey instrument

The survey was created and conducted using Google Forms. It included 19 closed-ended questions and one open-ended question, with an estimated completion time of around 10 minutes. It was divided into four sections (the survey is available in the Supplementary Data section, archived in the Zenodo archive):

- Socio-demographic information, including gender, age group, field, and institutional affiliation.
- Publishing habits, focusing on the average number of publications per year, journal selection criteria, and familiarity with open access.
- Awareness of predatory publishing, assessing perceptions, awareness levels, and attitudes towards unethical editorial practices.
- Open-ended feedback, enabling respondents to share comments, suggestions, or reflections related to the survey topic. (Maccarini et al. 2026)

The questionnaire items were designed based on prior research and international best practices in scholarly publishing ethics, as outlined by the Committee on Publication Ethics (COPE).

3.2 Data collection and analysis

Responses were automatically retrieved and exported to Microsoft Excel for data cleaning, then imported into R (version 4.3.1) for descriptive and statistical analyses. Each response was assigned a numerical identifier. Quantitative variables were summarised using absolute and relative frequencies, and, where relevant, stratified by participants' gender, age group, field, and professional qualification. Differences between groups were assessed using nonparametric tests: the Mann–Whitney U test for two-group comparisons (e.g., gender) and the Kruskal–Wallis test for variables with three or more groups (e.g., age, field, or professional qualification). For nominal variables, chi-square or Fisher's exact tests (with simulated p-values when suitable) were employed.

Qualitative feedback from the open-ended question was coded and categorised thematically to gain further insights. The findings of this analysis are presented in this article and will guide future research on the perception and prevalence of predatory publishing within academia.

²² Consiglio Nazionale delle Ricerche (CNR). www.cnr.it

²³ INFN – Istituto Nazionale di Fisica Nucleare. <https://www.infn.it/>

4. Results

General participation characteristics

A total of 258 responses were received, representing an overall response rate of 44.2%. Among respondents, 156 (60.2%) were men, 96 (37.5%) were women, and 6 (2.3%) preferred not to disclose their gender. Regarding age, most participants were between 30–39 years ($n=73$; 28.2%) and 40–49 years (63; 24.6%), followed by those aged 50–59 years (5; 20.1%), over 60 (40; 15.4%), and under 29 (30; 11.6%).

Most respondents worked at a public university (209 participants; 80.7%), while smaller groups were affiliated with research institutions (27; 10.4%), the public sector outside universities (12; 4.6%), private universities (6; 2.3%), or were freelancers or employed in companies (2 and 1, respectively).

In terms of professional status, associate professors (68; 26.3%) and PhD candidates (51; 19.7%) made up the largest groups, followed by researchers or assistant professors (45; 17.4%), full professors (34; 13.1%), and researchers in non-academic roles (27; 10.4%). Other categories, such as postdoctoral researchers (18; 7.0%), early-career researchers (8; 3.1%), and faculty members (1; 0.4%), were less common.

Participants come from a wide variety of disciplinary backgrounds. The largest groups were Engineering and Technology (41 participants; 15.8%), Life Sciences (38; 14.7%), Social Sciences (37; 14.3%), and Medical and Health Sciences (35; 13.5%), followed by Others (33; 12.7%), Arts and Humanities (23; 8.9%), Economics (16; 6.2%), Experimental Sciences (10; 3.9%), Physics and Astronomy (10; 3.9%), Chemistry (9; 3.5%), Philosophy (5; 1.9%), and Education (1; 0.4%). Detailed descriptive statistics are provided in Table 1.

Variable	
Age range, n (%)	
30-39	73 (28.2)
40-49	63 (24.6)
50-59	52 (20.1)
>60	40 (15.4)
<29	30 (11.6)
Sex, n (%)	
Male	156 (60.2)
Female	96 (37.5)
Prefer not to answer	6 (2.3)
Working place, n (%)	
Public University	209 (80.7)
Research Institution	27 (10.4)
Public Sector (not university)	12 (4.6)
Private University	6 (2.3)
Freelancer	2 (0.8)

Other	1 (0.8)
Companies	1 (0.4)
Professional title, n (%)	
Associate Professor	68 (26.3)
Ph.D. candidate	51 (19.7)
Researcher/Assistant Professor (tenured/non-tenured)	45 (17.4)
Full professor	34 (13.1)
Researcher Non-academic position	27 (10.4)
Postdoctoral Researcher	18 (7)
Early-Career Researcher (ECR)	8 (3.1)
Other	7 (2.7)
Faculty member	1 (0.4)
Field/discipline, n (%)	
Engineering and Technology	41 (15.8)
Life sciences	38 (14.7)
Social Science	37 (14.3)
Medical and Health Sciences	35 (13.5)
Other	33 (12.7)
Arts/Humanities	23 (8.9)
Economics	16 (6.2)
Experimental sciences	10 (3.9)
Physics and Astronomy	10 (3.9)
Chemistry	9 (3.5)
Philosophy	5 (1.9)
Education	1 (0.4)

Table 1. Demographic characteristics of the study cohort (n= 258).

Scientific publishing experience

Nearly all respondents had previous experience in scientific publishing. The majority had published more than 11 papers (166; 64.1%), followed by those with 1–5 publications (59; 22.8%) and 6–10 publications (30; 11.6%), while only a small minority had not yet published (4; 1.5%).

Regarding the open-access (OA) dimension, most respondents reported having published more than two OA papers (167; 64.5%), while 13.5% had not published any OA articles. A smaller proportion had published one (34; 13.1%) or two (23; 8.9%) OA papers. When asked about Article Processing Charges (APCs), 42.5% of participants indicated that APCs were covered by research projects (private or public), followed by institutional funds (36.3%) and cases where no fee was required (36.3%). Additional sources included university support (23.2%), personal payment (4.6%), and scholarships (0.8%). Because respondents could select more than one option, the percentages do not sum to 100%. While “institutional funds” generally refer to structured funding schemes with dedicated budgets to cover publication costs, and “university support” to broader and more

flexible forms of assistance (e.g., transformative agreements, repositories, or editorial support), the distinction between the two is not always clear and may involve overlap in how respondents interpreted these categories.

Overall, the data suggest that the Italian academic community represented in this survey is highly active in scholarly publishing and actively involved in open-access practices. The mechanisms for funding APCs, though, vary mainly depending on project-based and institutional support. (See Table 2 for detailed results)

Category	n (%)
No. of publications	
>11	166 (64.1%)
1-5	59 (22.8%)
6-10	30 (11.6%)
Not yet	4 (1.5%)
OA publications	
>2	167 (64.5%)
None	35 (13.5%)
1	34 (13.1%)
2	23 (8.9%)
APCs	
Covered by projects (private or public)	110 (42.5%)
Institutional funds	94 (36.3%)
No fee	94 (36.3%)
University support	60 (23.2%)
Personal money	12 (4.6%)
Scholarship	2 (0.8%)

Table 2. Scientific publishing habits and open-access experience among survey participants.

When analysing the criteria researchers use to choose an academic journal before submitting a manuscript (Figure 1), the journal's or publisher's reputation and the relevance of its scope emerged as the most decisive factors. Both variables showed the highest levels of agreement, with 95.8% and 93.8% of respondents, respectively, agreeing or strongly agreeing that these aspects influence their journal choice. Indexing in databases, impact metrics, and APC/payment transparency also received high scores, with over 70% of respondents agreeing or strongly agreeing. Conversely, aspects related to peer review transparency, editorial information visibility, and clear website guidelines showed more moderate levels of agreement, ranging from 60% to 70%. Finally, the DOAJ listing showed the most diverse distribution, with only 41.3% of respondents agreeing or strongly agreeing, and a significant proportion (38.2%) choosing the neutral option. These findings indicate that, while traditional reputation- and impact-based criteria remain dominant in journal selection, openness-related factors (such as transparency and inclusion in DOAJ) are not yet consistently incorporated into researchers' decision-making processes.

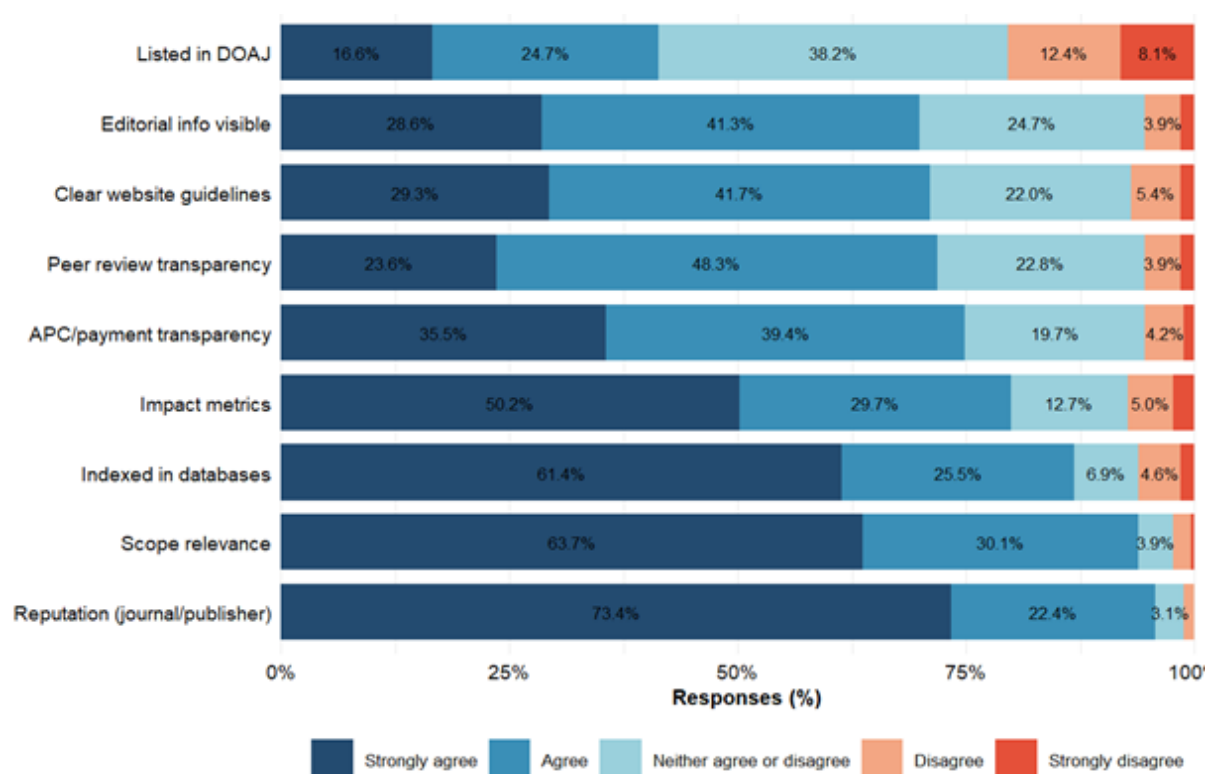


Figure 1. Measures employed by researchers to choose an academic journal before submitting a manuscript.

Regarding satisfaction levels, 49% of respondents are ‘Sometimes’ satisfied with the current academic publication system, 26.3% ‘Very often’, and 19.3% ‘Rarely’. Only 2 participants (0.8%) indicated they are “Always” satisfied, while 12 (4.6%) declared they are “Never” satisfied. Figure 2 displays the data by gender, age, field, and professional title. When broken down by gender, responses are almost identical across groups. Among female researchers (97 responses), the most common answers are ‘Sometimes’ (52.6%) and ‘Very often’ (25.8%), followed by “Rarely” (16.5%) and “Never” (4.1%). Similarly, among male respondents (156 responses), “Sometimes” (47.4%) and “Very often” (26.9%) are the most frequent responses, with “Rarely” (20.5%) and “Never” (4.5%) close behind.

Regarding age, satisfaction levels tend to rise slightly among older researchers. Respondents aged 60+ exhibited the highest satisfaction, with “Very often” (42.5%) and “Always” (2.5%) together representing almost half of the group. In contrast, younger participants (aged 40–49) were more likely to choose “Rarely” (31%). Statistically significant differences were observed across age groups (Kruskal–Wallis $\chi^2 \approx 14.5$, $df = 5$, $p = 0.005$, R). Similarly, satisfaction levels varied notably by professional title (Kruskal–Wallis $\chi^2 \approx 21.0$, $df=10$, $p=0.007$), with higher satisfaction among senior academics such as full and associate professors (“Very often”: 41% and 31%, respectively), and lower satisfaction among PhD candidates and early-career researchers, who mainly selected “Sometimes” (53% and 50%) or “Rarely”.

When grouped by disciplinary field, the highest proportions of “Very often” satisfaction were observed in Medical and Health Sciences (43%) and Engineering and Technology (34%), followed by Life Sciences (26%). In contrast, Arts and Humanities and Social Sciences showed higher proportions of “Rarely” responses (39% and 24%, respectively), indicating comparatively lower satisfaction in these areas.

In summary, satisfaction with the academic publication system appears moderate across all demographic and educational sectors, with statistically significant differences only by age and professional title. Overall, these findings highlight a common sense of ambivalence towards the current scholarly publication landscape.

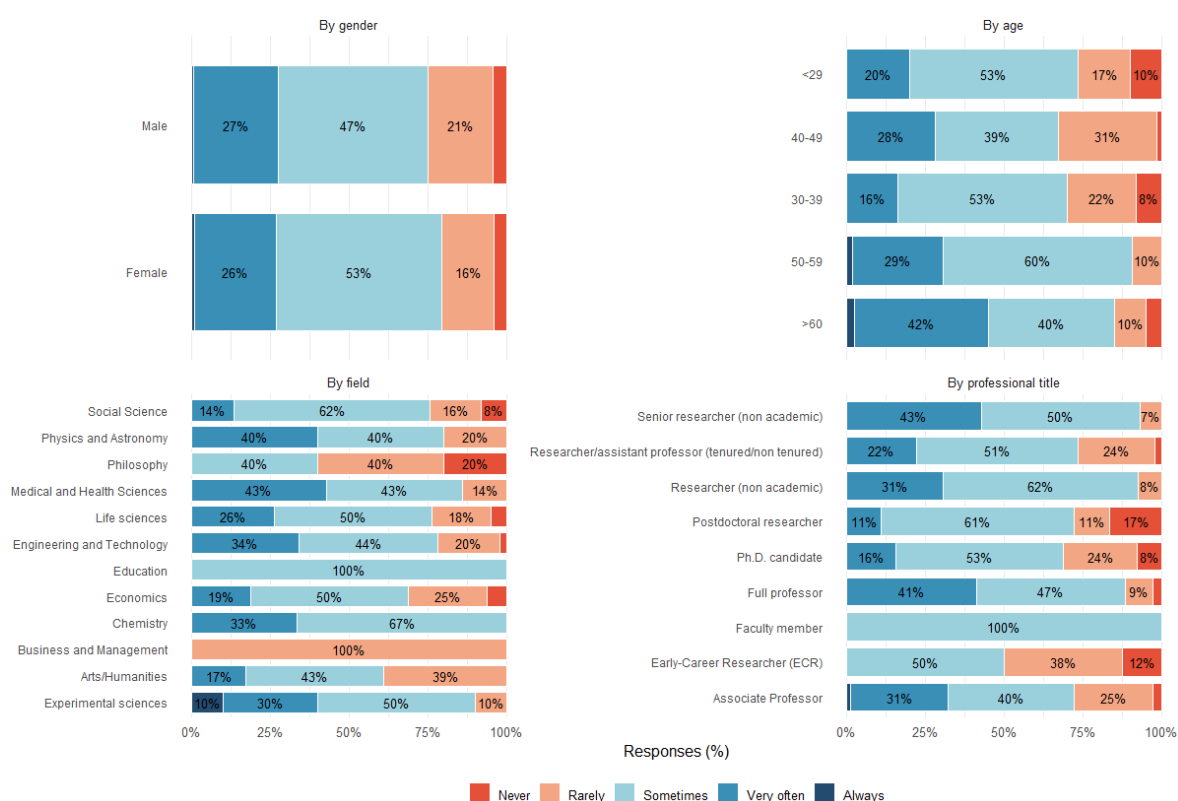


Figure 2. Percentage of satisfaction with the academic publishing system by age, gender, field, and profession title.

Predatory publishing awareness

Regarding awareness of predatory publishing practices, most respondents reported some familiarity or personal experience with the phenomenon. Nearly half of the participants (47.9%) reported discussing the issue with a colleague. Simultaneously, over one-third had direct experience with it, either as reviewers or readers (36.3%) or as authors (35.9%). Overall, one in three respondents (33.2%) reported hearing about it through social media, lectures, or presentations. In contrast, a small proportion of participants reported little or no awareness of the topic: 8.5% said they had never heard of it, and 5.8% mentioned they might have heard of it but were unsure. Awareness

levels varied considerably by professional title (Kruskal–Wallis, $\chi^2 \approx 21.0$, $p = 0.001$), with PhD candidates exhibiting lower awareness than senior academics, probably due to their relatively limited exposure to the publication and peer-review processes.

These findings demonstrate a high level of awareness and engagement with predatory publishing among the surveyed academic community, indicating that the problem is well recognised, frequently discussed among peers, and that many researchers have encountered it firsthand.

Figure 3. Predatory publishing awareness. The colour red indicates Low awareness (“I never heard it before”; “I may have heard it, but not sure”), orange shows Medium awareness (“Heard it in person/social media/lecture/presentation”; “Discussed with a colleague”), and green signifies High awareness (“Had to deal with it in real life as author”; “Had to deal with it in real life as reviewer/reader, etc.”).

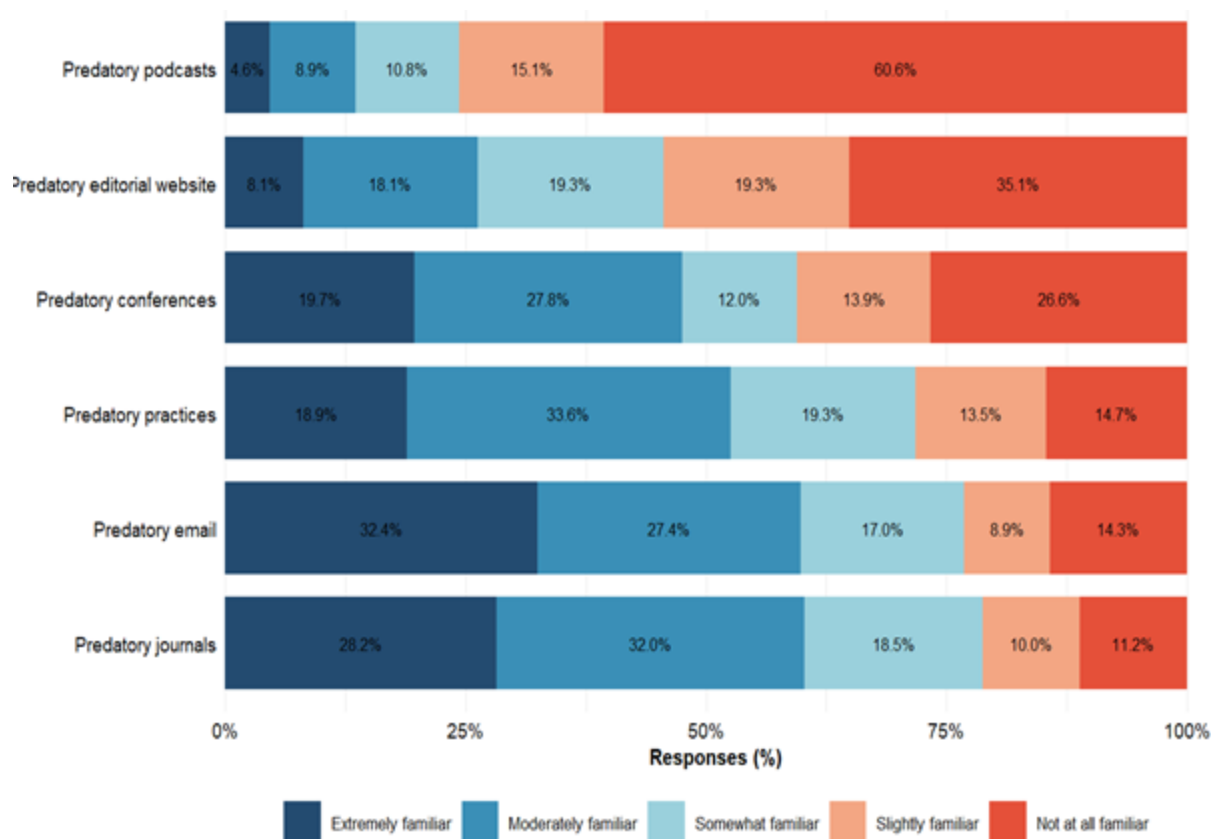


Figure 3. Understanding of predator-related concepts.

Respondents showed varying levels of familiarity with different aspects of predatory publishing (Figure 4). Overall, predatory journals and predatory emails were the concepts most recognised by participants. Specifically, 60.2% of respondents reported being moderately (32.0%) or extremely familiar (28.2%) with predatory journals, and a similar pattern was observed for predatory emails, with 59.8% indicating moderate (27.4%) or high familiarity (32.4%). In contrast, predatory podcasts were the least familiar: 60.6% of participants reported no familiarity, and only 13.5% report-

ed moderate or high familiarity. Awareness of predatory editorial websites was also limited: 35.1% were not at all familiar, and just 26.2% indicated greater familiarity (moderately or extremely familiar).

Familiarity with predatory practices and predatory conferences occupied an intermediate position. About half of the respondents (47.5% and 52.5%, respectively) reported moderate or extreme familiarity, suggesting that awareness of these issues is uneven and possibly linked to direct experience in the academic publishing process. These results indicate that exposure to predatory practices increases with proximity to the publication process, while peripheral formats (e.g., podcasts, websites) remain less recognised among academics.

The characteristics most strongly linked to predatory journals were aggressive or spam solicitation (86.1% agree or strongly agree), unqualified editors or reviewers (84.6%), and hijacked or fraudulent websites (79.6%). Claims about indexing or partners also received high support (77.6%). In contrast, blocking web crawlers or virus risk attracted much less agreement (40.5%) and the highest levels of neutrality (37.5%), indicating lower certainty among respondents regarding this criterion. Statistical analysis revealed a significant difference by age (Kruskal–Wallis, $\chi^2 \approx 17.5$, $p = 0.016$), suggesting that older researchers tended to express stronger agreement with the indicators of these editorial features.

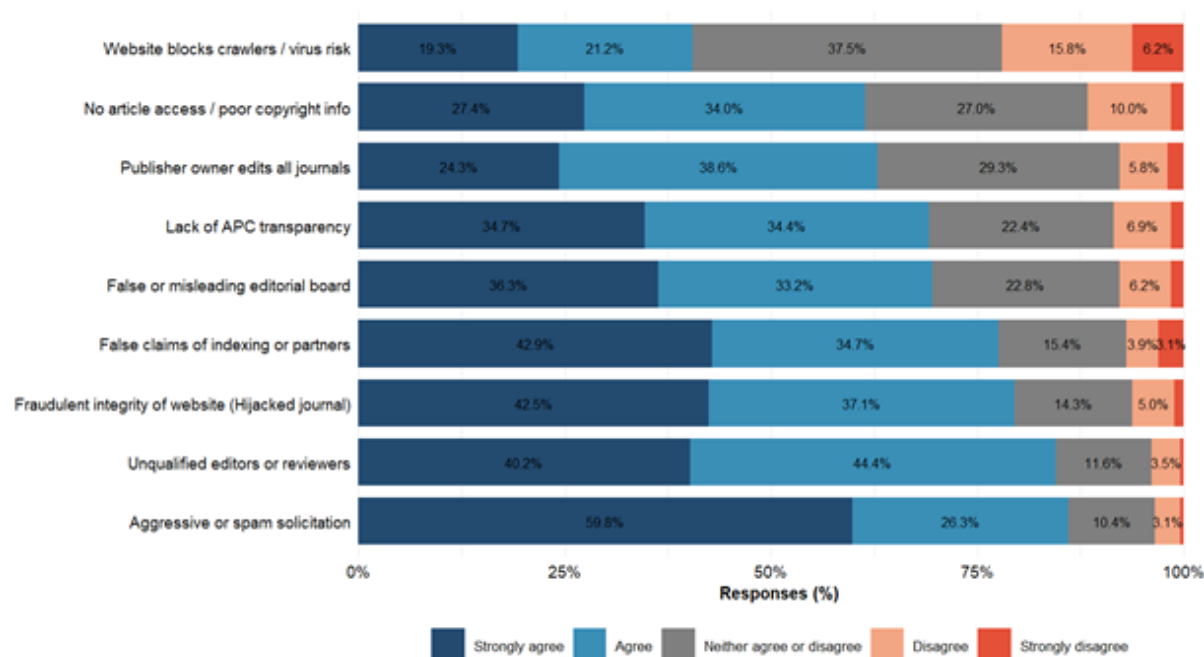


Figure 4. Features most closely linked to predatory journals.

Most respondents agreed that multiple systemic and procedural factors sustain predatory publishing practices (Figure 6). The highest agreement was for the “publish or perish” culture (84.1% agree/strongly agree), spam invitations to publish or review (84.5%), and a rapid or poor peer review process (85.3%), highlighting the perceived influence of academic pressure and the lack of control over editorial processes. Similarly, aggressive email submission campaigns (79.9%) and

inexperienced authors or lack of editorial support (79.6%) were also widely recognised as enabling conditions. A moderate level of agreement was observed regarding the lack of transparency in journal information (76.1%) and the lack of awareness of predatory publishing (75.7%), indicating that limited access to information and insufficient knowledge remain key vulnerabilities in the research ecosystem. Conversely, items such as lower publication costs (APC advantage) (61.8%), data falsification, plagiarism, ghost authorship (57.5%), lack of communication among colleagues (56.4%), and academic promotion pressures (53.7%) received less support, reflecting a more complex or varied perception among respondents about their significance.

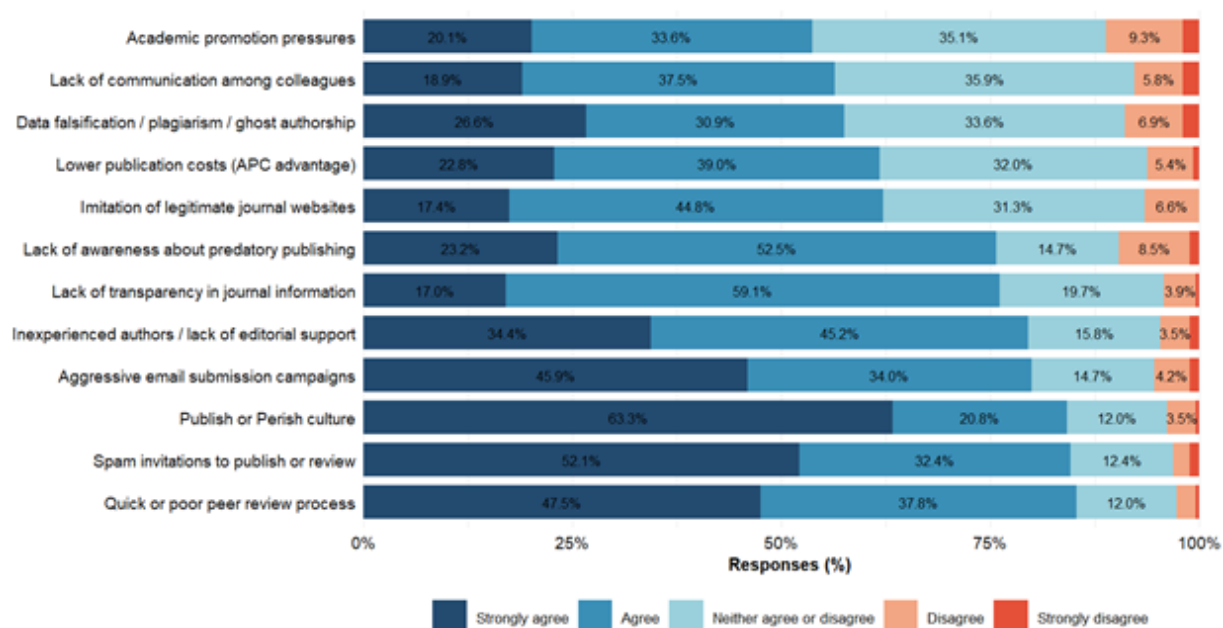


Figure 5. Predatory publishing practices.

When asked whether they had encountered any unexpected editorial malpractice or misconduct in academic journals, 30.5% of respondents answered Yes ($n=79$), while 44.8% reported No ($n=116$), and 24.7% were unsure ($n=64$). Statistically significant differences emerged by professional title (Fisher's exact test, $p=0.011$), suggesting that senior academics are more likely to have experienced or identified editorial misconduct than early-career researchers. These results suggest that although a significant proportion of participants have not directly experienced editorial misconduct, almost one in three have perceived or encountered such practices at least once in their academic careers. Among those who reported being affected ($n = 143$), the majority indicated they had experienced misconduct as an author (67.8%), followed by as a reviewer (21.0%) and as a member of an editorial committee (5.6%). A smaller proportion referred to experiences as students (2.1%) or mentioned other situations (3.5%). These findings emphasise that editorial misconduct is most often perceived within the author–journal interaction, rather than during peer review or editorial service stages. Regarding specific predatory practices experienced by respondents (Figure 7), the most frequently reported was spam or phishing email solicitation to submit a manuscript, indicated by 75.5% of

participants (108 participants). This was followed by poor or unclear peer-review experiences (n=94; 65.7%), indicating that communication and transparency in the review process still raise significant concerns. Other reported issues included unsolicited or unexpected payment requests not previously mentioned (9.1%), being added as an editorial member without prior consent (8.4%), and being unable to withdraw one's work from a journal (4.9%). A small proportion of respondents (0.7%) also reported instances of unauthorised access to their work or personal data, while 11.2% selected other circumstances. Statistically significant differences were found by professional title (Fisher's exact, $p = 0.023$), suggesting that senior academics (e.g., full and associate professors) were more likely to report experiencing these issues than early-career researchers. Overall, these results indicate that experiences with deceptive editorial practices differ and often stem from unsolicited communication or insufficient peer-review procedures.

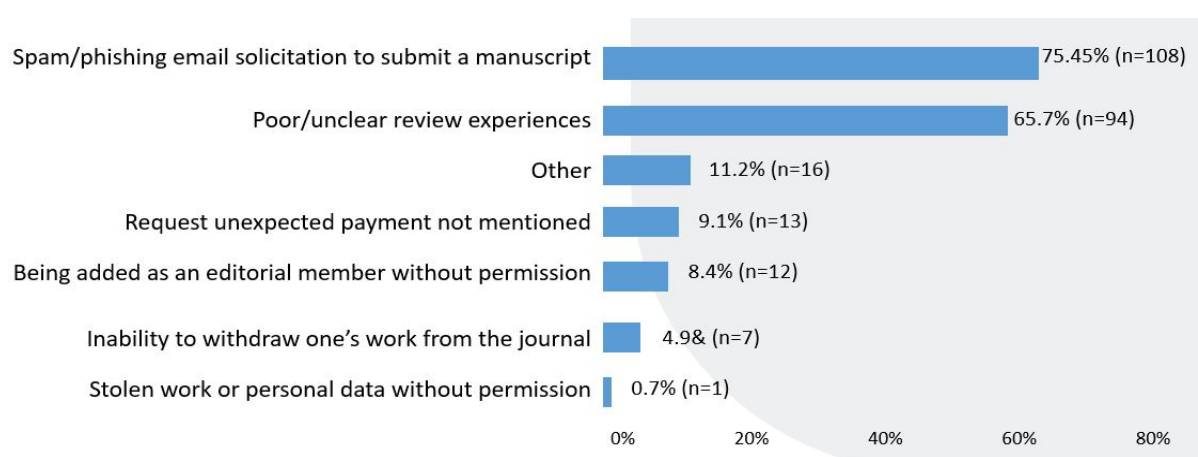


Figure 6. Predatory practices experienced by the respondents.

Integrity awareness, verification tools, and research ethics training

Nearly half of the respondents (47.9%) reported that they had never heard of such tools or the use of verification tools (e.g., Beall's List,²⁴ Cabells Journalytics,²⁵ COPE,²⁶ or Think.Check.Submit,²⁷ Retraction Watch,²⁸) to assess the reliability of journals or publishers. Compared to this, 18.9% stated they do not use them. Conversely, 26.6% reported at least occasional use (16.6% "sometimes" and 10% "yes"), indicating limited but existing awareness of these resources within the academic community.

²⁴ This list was deleted by Beall in 2017 and kept active by anonymous volunteers. <https://beallslist.net/>

²⁵ It is an underpayment service (Journalytics Academic & Predatory Reports) for the academic research community. <https://cabells.com/solutions/predatory-reports>.

²⁶ COPE - Committee on Publication Ethics. <https://publicationethics.org/>

²⁷ It is a checklist to help you discover what you need to know when assessing whether or not a publisher is suitable for your research.

²⁸ It is a database that reports retractions of scientific articles and related topics. <https://retractionwatch.com/> or <https://retractiondatabase.org/RetractionSearch.aspx?>

Regarding the perceived effect of predatory publishing practices on scientific integrity, nearly all respondents recognised at least a moderate influence. Most rated the impact as moderate (45.2%) or high (45.2%), while a smaller portion considered it low (9.3%) or none (0.4%). These results demonstrate a broad consensus among researchers that predatory practices significantly threaten research credibility and ethical standards.

Regarding training on research integrity and responsible conduct of research, self-directed learning was the most common approach: 70.3% of respondents reported being autodidacts (“by myself”), followed by tutoring or guidance from teachers or colleagues (36.3%) and on-the-job training (14.7%). Formal educational opportunities were less common: 14.3% had completed university courses, 4.6% had engaged in online tutorials, and only 1.2% had received training from private stakeholders. 51% of participants reported never receiving specific training on ethical publication practices. Statistically significant differences appeared across age groups ($\chi^2 \approx 16.3$, $p = 0.014$), with younger researchers more often lacking formal training. Meanwhile, mid-career and senior participants reported greater exposure to instruction on integrity-related matters.

Open-ended responses on predatory publishing in academia

Thirty-five participants provided open-ended comments on predatory publishing in academia. Their reflections discussed common difficulties in selecting an appropriate journal, as well as challenges encountered before submitting a manuscript and during the review process. Respondents’ observations were thematically categorised into groups such as the Open Access model, article processing charges (APCs), scientific integrity, safelists (whitelists) and watchlists (blacklists), spam email solicitation, and peer review quality, as summarised in Table S.1 of the Supplementary Material.

Overall, participants expressed strong concerns about maintaining scientific integrity within the current “publish or perish” system and about the ongoing difficulty of distinguishing predatory from legitimate publishers. Many also emphasised the need for clearer, locally tailored information on the Open Access publishing landscape to help differentiate trustworthy editorial practices from deceptive or unethical ones. Poor-quality peer review was described as the “worst editorial practice,” while aggressive email invitations were commonly seen as a clear sign of predatory activity.

4.1 Discussion

The results of this survey present a nuanced yet troubling view of Italian researchers’ awareness and experiences with predatory publishing. Although awareness of predatory journals is widespread, it varies across age groups and professional categories, indicating that structural, institutional, and experiential factors continue to shape how scholars perceive and respond to deceptive publishing practices. These findings support previous evidence that predatory publishing is a systemic and multifaceted issue, rather than a marginal phenomenon limited to specific disciplines or countries (Grudniewicz et al. 2019; Shen & Björk 2015). While the sample size of 258 participants is not statistically representative of the entire research population, it is large enough to support descriptive and exploratory analyses.

Awareness and experience across age and career stages

The analysis shows that awareness of predatory publishing increases with academic seniority and research experience, particularly among respondents aged 40–49, who also reported the highest publication activity. This trend aligns with previous studies indicating that familiarity with predatory practices increases with direct exposure to editorial and peer-review processes (Manca et al. 2017; Christopher and Young 2015).

In contrast, PhD candidates and early-career researchers demonstrated notably lower awareness and familiarity, indicating their limited participation in journal selection and review. This pattern corresponds with concerns identified in the literature that younger scholars, often under intense “publish or perish” pressures (Kurambayev and Freedman 2021), are particularly vulnerable to misleading invitations and dubious editorial practices. The absence of formal mentoring and structured guidance on publication ethics intensifies this vulnerability (Shen and Shah 2023).

Structural and contextual factors shaping awareness

Within the Italian academic system, the evaluative framework coordinated by ANVUR emphasises bibliometric algorithms, journal rankings, and indexing in Scopus or the Web of Science (Baccini and Re 2025). Although these mechanisms aim to safeguard quality and accountability, they may unintentionally reinforce a publication culture that prioritises quantity and journal prestige over transparency and integrity of editorial standards. This dynamic, combined with uneven institutional support and ongoing language barriers, may explain why Italian scholars, especially those in under-resourced or non-Anglophone settings, remain vulnerable to deceptive publishing. National media have echoed similar concerns, noting Italy’s relatively high exposure to questionable journals (Manca et al. 2016).

Moreover, the survey revealed that almost a third of respondents had personally encountered or observed editorial malpractice or misconduct, including unexpected publication fees, lack of peer review, and deceptive indexing claims. These experiences closely resemble the characteristics described by Beall (2012; 2017) and subsequently formalised by Grudniewicz et al. (2019), highlighting ongoing concerns regarding transparency and oversight in editorial practices.

The persistence of such practices, despite the availability of tools like *Cabells Journalytics* or *Think. Check. Submit.*, highlights that the challenge lies not only in detection but also in disseminating trustworthy information. As Koerber et al. (2020) emphasised, the post-Beall landscape continues to lack universally accepted, reproducible criteria to distinguish legitimate from predatory journals. This gap remains evident in Italy’s evaluative environment.

Ethical implications and training needs

More than half of the surveyed academics reported receiving no formal training in research integrity or responsible publishing, confirming the educational gap already highlighted by Mabou Tagne et al. (2020). This lack of structured guidance hampers researchers’ ability to recognise predatory practices and results in uneven awareness across institutions. Given that ANVUR has

recently joined the Coalition for Advancing Research Assessment (CoARA), which advocates qualitative and context-sensitive evaluation (Bertocchi et al. 2015), this gap seems particularly paradoxical. The results reveal a misalignment between institutional commitments to responsible assessment and researchers' lived experiences, who continue to face intense productivity pressures in competitive environments with limited ethical guidance.

Enhancing integrity training and ethical literacy is therefore crucial, not only to prevent misconduct but also to bring Italian academia in line with the broader European initiative for Responsible Research and Innovation (RRI). Incorporating obligatory modules on publishing ethics, advocating COPE-aligned standards, and guaranteeing access to reliable resources such as DOAJ, Cabells Journalytics, and Think.Check.Submit. would be tangible measures to bridge this gap.

5. Conclusions and Limitations

This study offers one of the earliest evaluations of awareness and experiences of predatory publishing within the Italian academic community. The results confirm that the issue should be seen not just as a moral failing but as a structural consequence of evaluative pressures, funding imbalances, and uneven institutional frameworks.

Awareness is widespread but fragmented, especially among early-career researchers, who often lack proper mentoring and training. Tackling these gaps requires systemic measures: aligning national evaluation frameworks with CoARA principles, strengthening institutional mentoring and research integrity training, and promoting a non-commercial open access model with clear, evidence-based guidelines for journal evaluation.

This study has limitations in terms of representativeness, as the small sample size of 258 participants may not accurately reflect the diversity of the Italian academic community with regard to seniority, research fields and institutional type. Nevertheless, the collected data enabled meaningful statistical analysis. Additionally, because this was a voluntary survey, participants may have been more knowledgeable or more sensitive to the topic, which could introduce selection bias and overestimate their level of awareness. Considering the self-reported nature of the data, the discussion on publications in predatory journals may be affected by misconceptions or social desirability. Lastly, the applicability of the findings is limited by the study's focus on a specific geographical area. This is partly due to constraints on data management approval, which make it challenging to generalise the conclusions to other national or international contexts.

Predatory publishing both reflects and worsens deeper issues in scholarly communication, where an emphasis on visibility and performance metrics can undermine scientific credibility. Enhancing ethical standards, transparency, and institutional responsibility will be crucial to protecting the integrity of Italian research and ensuring that academic career progression does not undermine public trust in science.

Conflict of interest

There are no conflicts of interest.

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Appendix

Table 3. S.1.

Open Access Model	It would be beneficial to provide precise information on open science practices and open-access publications, which are too often conflated with predatory publishing. Predatory journals are more prevalent in certain research fields than in others. For instance, in the IT sector, most open-access journals are reputable and trustworthy, providing reliable sources of information, such as those published by MDPI. In my field (theoretical physics), I hardly know anyone who has published in open-access predatory journals. There is probably greater awareness. Stop the witch hunt against open-access journals that are not ‘predatory’, such as MDPI and Frontiers. Expanding the definition of ‘predatory’ to include them weakens the entire effort against genuinely predatory journals.
Article Process Charge (APC)	The Italian system means PhD candidates and early-career researchers generally do not pay to publish a manuscript. However, they contribute towards publishers for conferences and seminars. ‘Pay to publish’ has been a vast deal, spreading like wildfire across all journals globally, with the Italian compulsory open-access publishing. No one should have to pay to publish an article, in any journal, including the ‘prestigious’ ones. There are unjustifiably high charges for access, submissions, and article publication, with substantial profits going to a few private companies funded mainly through public investments in research.
Scientific Integrity	‘Publish or perish’ is the death of scientific integrity, as it encourages competition at all costs instead of collaboration. Some universities or research institutions permit publication in predatory journals when they should prohibit them, which is problematic because it results in the loss of public funds and can significantly influence the selection of researchers in these sectors. Even today, the checks on both the quality of publications and the journals where they are published remain minimal. On the authors’ side, predatory publishing is driven by the pressure to publish numerous scientific articles to advance their careers. The practise of evaluating researchers based on the quantity of published papers rather than their quality is the most significant issue in academia, at least in my country. I am familiar with predatory publishers and journals, and it is advised that early-career researchers avoid them. The predatory publishing practices do not compromise scientific integrity if researchers avoid articles published in journals known for their ‘predatory’ behaviour. It is difficult to distinguish between predatory and non-predatory publishers. As researchers, we are constantly invited to submit papers or attend conferences. On the one hand, the ANVUR (National Agency for the Evaluation of the University System and Research) list of scientific journals in Italy helps protect against predatory journals. However, it restricts freedom of research and dissemination. Universities should consider the aims and scope of journals rather than the quartile. The number of article citations, excluding self-citations, should be taken into account when assessing the quality of the article rather than the journal. The current system of academic publications is harmful and ineffective, with all its rankings, indices, impact factors, citations, etc. This consumes a significant amount of resources that could be better used for research and researchers, rather than for their “monitoring”. Overall, the “legal” part of the system itself is morally repulsive. The illegal predatory practices are merely the most aggressive expression of a much deeper and more insidious cancer.

	Beyond strictly predatory journals, there are also structural problems in class A journals. Stop evaluating only the QUANTITY of publications and not the QUALITY; the same applies to citations. A single-authored high-quality paper in an excellent journal (based on international reputation, editorial standards, etc.) counts 1000 times more than ten papers published with many co-authors in questionable journals (despite having a good impact factor and high metrics). Predatory publishers stem from the entire scholarly publishing, indexing, and assessing process, which needs to be reconsidered.
Savelist (whitelist) Watchlist (blacklist)	Whitelists are recommended over Blacklists (i.e. Beall's List). Each University should share a list containing these fraudulent journals, fake conferences, etc., for consideration. Journal etiquette is not well-established, as high-quality work is published in journals that later prove to be predatory.
Spam email	There is some awareness that an email marked as spam, sent by someone unfamiliar or unknown in your sector, is most likely a scam. Aggressive email campaigns are a symptom of predatory publishers.
Peer review	Not having enough time for a detailed peer review is the worst editorial practice. Good peer review practice is essential, as it is the only way to guarantee the quality of scientific papers. It is a generally unacceptable practice to treat the work of peer-reviewed researchers as voluntary. Reputable journals should cease requiring (or even mandating) the indication of potential reviewers during submission. This can easily foster bias through friend influence.

Open Access Publishing at the University of Belgrade (Serbia): An Analysis of Journals in the Social Sciences and Humanities

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ABSTRACT

Open access publishing has emerged as a response to the traditional subscription-based model of scholarly communication, aiming to ensure free and unrestricted access to research outputs. In line with the principles of the Budapest Open Access Initiative and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, the University of Belgrade promotes open access publishing and self-archiving of research outputs in institutional repositories.

The University of Belgrade comprises 31 faculties, grouped into four broad areas: social sciences and humanities, medical sciences, natural and mathematical sciences, and technical and technological sciences. All faculties maintain active publishing programs, producing scientific monographs, textbooks, and numerous scholarly journals.

Open access and increased visibility significantly enhance citation rates and the impact of both authors and their institutions. Faculties within the University of Belgrade are increasingly transitioning from traditional print publishing to open access models.

This paper presents an overview of publishing practices in the field of social sciences and humanities at the University of Belgrade. It includes data on the number of open access journals, the platforms used for their dissemination, and a brief bibliometric analysis of selected titles indexed in the Web of Science and Scopus databases.

KEYWORDS

Open Access Publishing; University of Belgrade; Social Sciences and Humanities; Bibliometric analysis; Scholarly Journals; Research visibility.

Introduction

Academic publishing is a core component of scholarly communication, enabling the dissemination of research outputs such as journal articles, books, and theses. Scientific journals have played a key role in shaping the organization and practices of scholarly communication (Larivière, Haustein, and Mongeon 2015). They serve as primary channels for the dissemination of current research findings across scientific fields, most of which are highly specialized.

The first scientific journals appeared in 1665 in Paris (*Journal des sçavans*) and London (*Philosophical Transactions*), marking the beginning of formal scientific communication. Since then, their number has grown continuously (Djokovic 2020, 450). The development of the Internet significantly accelerated information exchange and contributed to the expansion of electronic and Open Access (OA) journals. At the same time, increasing subscription costs limited access to scientific content, particularly for libraries, which often could not afford full coverage of available resources. This situation contributed to the emergence of the OA movement, which promotes free access and reuse of scholarly outputs, including articles, monographs, datasets, and related materials (IFLA 2003).

In the past two decades, Open Access (OA) and the speed of scientific communication have become central issues in scholarly publishing. OA enhances the visibility, dissemination, and evaluation of research and supports greater transparency in scientific processes.

This paper examines the publishing output of scientific journals at the University of Belgrade, focusing on the field of social sciences and humanities. The findings are presented in the following sections.

Open Access Development

According to the European Commission, “Open Access is the practice of providing online access to scientific information that is free of charge to the user and is reusable” (European Commission 2023). OA therefore refers to unrestricted online access to scholarly works, including journal articles, books, and dissertations, and is widely used in scholarly publishing to describe the free availability and reuse of research outputs (Laakso and Björk 2012, 1).

The development of OA publishing can be traced back to the 1990s, when increasing subscription costs and the growing concentration of publishing power among commercial publishers created significant barriers to access to scientific literature. In response to these challenges, the OA movement emerged as a new model of scholarly communication aimed at improving accessibility and dissemination of research results.

The term Open Access (OA) became internationally established in 2002 with the formalization of the movement through a series of foundational policy documents known as the “BBB” declarations: the Budapest Open Access Initiative, the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, and the Bethesda Declaration on Open Access Publishing. These documents collectively emphasize the need for sustainable, accessible, and non-restrictive models of scholarly communication.

The Budapest Open Access Initiative (2002) defines OA as the free availability of scholarly literature on the public internet, allowing users to read, download, copy, distribute, print, and use full texts without financial, legal, or technical barriers (Budapest Open Access Initiative 2002).

The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (2003) further promotes OA publishing and highlights the role of the Internet in the dissemination and long-term preservation of scientific knowledge. It has been signed by numerous institutions worldwide, including several universities in Serbia. The University of Belgrade joined the Declaration in 2011, thereby committing to the promotion of OA through self-archiving and publication in OA journals. Shortly thereafter, it established its institutional repository within the University Library “Svetozar Marković” in Belgrade (Djokovic 2021, 481).

The Bethesda Declaration on Open Access Publishing (2003) complements these initiatives by defining key principles for the expansion of OA and emphasizing cooperation between libraries, publishers, and research institutions in developing sustainable publishing models.

OA publishing has since become a widely accepted model of scholarly communication and provides the conceptual foundation for various implementation strategies at both national and institutional levels.

Within scholarly publishing literature, four main models of OA are commonly distinguished:

- Green Open Access: Authors publish in subscription-based journals and self-archive a version of their work in an institutional repository. Access is often provided after an embargo period or under publisher-defined conditions.
- Gold Open Access: Articles are made immediately and freely available online, typically through OA journals or platforms. Publication costs are usually covered through Article Processing Charges (APCs) paid by authors or their institutions.
- Hybrid Open Access: Subscription journals offer authors the option to make individual articles openly accessible upon payment of an additional fee, while the remainder of the journal content remains behind a paywall.
- Diamond Open Access: Neither authors nor readers are charged fees; publishing costs are covered by institutions, funding bodies, or sponsorships. This model is widely adopted in non-commercial academic publishing contexts.

The principles and models of OA outlined above have been widely adopted in international scholarly publishing systems and have subsequently informed the development of national and institutional OA policies. In this context, many countries have implemented open science strategies that operationalize these models within specific legal and institutional frameworks, including Serbia and the University of Belgrade.

The Diamond Open Access model is further discussed in the following section.

Diamond Open Access in the European Scholarly Publishing Framework

In recent years, the Diamond Open Access model has gained importance in the development of open access and is widely recognized as one of the most sustainable forms of non-commercial scholarly publishing (Ancion et al. 2022). Unlike the Gold Open Access model, where publication costs are usually covered by Article Processing Charges (APCs), Diamond Open Access is generally understood as a model in which neither authors nor readers pay for publishing or access, while costs are covered by universities, research institutions, libraries, academies of scienc-

es, scholarly associations, or other public or non-commercial funders, ensuring that publishing remains non-profit and under academic control.

A key feature of the Diamond model is that publishing remains within the academic community (community-owned publishing) (Becerril et al. 2021). This structure ensures editorial independence and supports academic autonomy, as journals are not driven by commercial interests but by the circulation of scientific knowledge and is based on non-commercial, community-led principles. Diamond Open Access has developed into a global movement. It emphasizes multilingualism, support for locally grounded publishing initiatives, and the role of non-commercial academic journals within different scholarly communities (Science Europe 2022; cOAlition S 2022). This is reflected in European policy discussions that support equitable publishing models and recognition of local scholarly communication systems.

The importance of Diamond Open Access has increased through several European and international initiatives. After *The OA Diamond Journals Study* (Becerril et al. 2021) and the *Action Plan for Diamond Open Access* (Ancion et al. 2022), the Diamond model became one of the main directions in European scholarly publishing development. These initiatives stress the need for stronger institutional support for non-profit publishers, better editorial processes, shared infrastructure, and higher visibility of Diamond journals.

The European Union supported this direction through the Council of the European Union (2023), where Diamond Open Access is recognized as an important model for sustainable scholarly publishing. The conclusions also highlight multilingualism, bibliodiversity, and the role of academic communities in governing publishing infrastructure.

The further development of this model is also seen through the European Diamond Capacity Hub (EDCH, 2025), which since 2025 supports Diamond publishers through shared standards, training for editorial teams, and development of technical infrastructure. Within this framework, the Diamond Open Access Standard (DOAS) and the Diamond Discovery Hub (DDH) were developed, with the aim of improving visibility and aligning editorial and technical practices with international standards. The Diamond Discovery Hub (DDH) database was also used in this study to check the visibility of the journals included in the sample within the European Diamond Open Access framework.

The publishing activity of the University of Belgrade is an example of institutionally supported non-commercial publishing. The journals included in this study publish in full open access without fees for authors or readers, which fits the main characteristics of the Diamond Open Access model. The analysis shows that university publishing fits into broader European developments in open science. Diamond Open Access is particularly relevant for smaller linguistic and academic communities, such as the Serbian one, as it supports the sustainability of scholarly communication in the national language while simultaneously increasing international visibility through open and non-commercial dissemination channels. This contributes to the preservation of linguistic diversity and bibliodiversity in scholarly publishing and strengthens the integration of locally grounded research into global open science frameworks (Council of the European Union 2023; Science Europe 2022; cOAlition S 2022).

This indicates a general alignment between the publishing practices of the University of Belgrade and broader European and international developments in Diamond Open Access and open science policy (Council of the European Union 2023; Science Europe 2022).

Open Access at the University of Belgrade

Building on the international development of OA publishing and related policy frameworks, Serbia has established its own national open science infrastructure aimed at aligning research dissemination practices with global standards. The Ministry of Education, Science and Technological Development of the Republic of Serbia launched the Open Science Platform in 2018 with the aim of improving access to scientific literature and increasing the visibility of research outputs. The Platform defines OA to research publications as the right of every Internet user to read, download, and use scholarly publications free of charge, provided that the source is properly cited and that the content is used in accordance with applicable license terms (Open Science Platform 2018).

Within this framework, the Ministry mandates that research output must be made openly accessible either immediately or within 12 months from the date of publication for natural, medical, and technological sciences, and within 18 months for social sciences and humanities. In accordance with these provisions, state universities, research institutes, and certain private higher education institutions in Serbia have adopted corresponding policies and regulatory frameworks supporting the implementation of open science principles (Open Science Platform 2018).

The Open Science Platform of the University of Belgrade was adopted by the University Senate on 13 March 2019. It applies to all members of the academic community engaged in research activities at the University of Belgrade. The Platform promotes the principles of open science, with particular emphasis on increased visibility of research outputs, improved citation impact, and greater international recognition of the University of Belgrade. It also encourages the alignment of institutional publication practices with OA principles.

OA in Serbia is implemented through institutional and national policies aligned with international standards, primarily through self-archiving practices and publication in OA journals. These mechanisms ensure broader dissemination of publicly funded research and support compliance with open science principles.

The University of Belgrade consists of 31 faculties organized into four broad disciplinary groups: social sciences and humanities, medical sciences, natural and mathematical sciences, and technical sciences. All faculties maintain active publishing programs, including scientific monographs, textbooks, and a substantial number of peer-reviewed scholarly journals. In recent years, these faculties have increasingly transitioned from traditional print publishing toward OA models for scientific journals.

This study focuses on journal publishing output in the field of social sciences and humanities at the University of Belgrade. Within this group, there are ten faculties: the Faculty of Economics, the Faculty of Law, the Faculty of Orthodox Theology, the Faculty of Teacher Education, the Faculty of Security Studies, the Faculty of Special Education and Rehabilitation, the Faculty of Political Sciences, the Faculty of Sport and Physical Education, the Faculty of Philosophy, and the Faculty of Philology. All these faculties maintain active publishing activities, including monographs and peer-reviewed scholarly journals in their respective disciplines. This institutional structure provides a strong foundation for the implementation and sustainability of OA publishing practices across disciplines.

National Evaluation Framework for Scientific Journals in Serbia

Scientific journals play a central role in scholarly communication, serving as primary platforms for the dissemination and exchange of research results, as well as for academic dialogue within specific disciplines (Vučković 2009, 1).

In academic career advancement, publication in peer-reviewed journals is a key requirement. In order to be indexed in international databases such as the Web of Science Core Collection (WoS) and Scopus, journals must meet established editorial and technical standards, including transparent peer-review procedures, rigorous manuscript selection processes, and the use of Digital Object Identifiers (DOIs). High-quality journals are typically characterized by well-defined editorial policies, qualified editorial boards, and standardized publication formats (Šipka 2014, 10).

In Serbia, the evaluation of scientific output was traditionally based on peer review and publication counts. Since the early 2000s, bibliometric indicators have been increasingly introduced as complementary tools in research assessment, gradually becoming an integral part of the national evaluation system (Filipi Matutinović 2014, 48). The current regulatory framework is defined by the Regulation on Categorization and Ranking of Scientific Journals, which establishes the criteria for journal classification and serves as the basis for evaluating research outputs in Serbia (Official Gazette of the Republic of Serbia 159/2020).

National journal evaluation practices are aligned, to a significant extent, with the criteria used in international indexing databases such as WoS and Scopus. Systematic evaluation of Serbian scientific journals has been conducted since 2003 under the auspices of the Ministry responsible for science. Since 2016, the Mathematical Institute of the Serbian Academy of Sciences and Arts (SASA) has been responsible for bibliometric monitoring and the preparation of annual reports on national scholarly publishing.

Based on these reports, scientific journals in Serbia are classified annually into six categories:

- M23 – International journal
- M24 – Journal of international significance
- M51 – Top national journal
- M52 – Prominent national journal
- M53 – National journal
- M54 – Journal categorized for the first time.

Scientific journals in Serbia may be published in print, electronic, or hybrid print–electronic formats.

Research

Methodological approach

A review of the relevant literature on OA publishing in Serbia indicates that studies focusing on the evaluation of individual journal titles published in OA are still limited. For this reason, a comparative study was conducted on a sample of scientific journals in the field of social sciences and humanities published by faculties of the University of Belgrade.

The initial step involved the selection of journal titles published by faculties belonging to the social sciences and humanities group at the University of Belgrade. The data source was the national

list of categorized scientific journals, compiled annually on the basis of bibliometric evaluations of journals in Serbia. A total of 46 journal titles were selected for analysis (detailed data are provided in the appendix).

The selected journals were analyzed in parallel according to predefined research objectives. Conclusions were drawn through comparative and descriptive analysis of the collected data. Data were gathered using an inductive approach and presented in tabular form. Some indicators were processed using Microsoft Excel.

Journals were additionally analyzed according to the language(s) of publication (Serbian, English, or bilingual editions), as language represents an important factor influencing international visibility, accessibility, and indexing potential. In addition, journals were classified according to the type of publishing platform used, including Open Journal Systems (OJS), institutional websites, and other web-based publishing solutions without integrated editorial workflow systems.

As part of the methodological framework, the Diamond Discovery Hub (DDH) database was consulted as a supplementary tool for examining the visibility of the selected journals within the European Diamond Open Access infrastructure.

The Diamond Open Access status of the journals was verified based on publisher information, journal websites, and the absence of article processing charges (APCs), as well as institutional ownership and funding models.

All journals included in the sample operate under the Diamond Open Access model, which constitutes a defining structural characteristic of the dataset and provides an important analytical context for the interpretation of the results.

Research objectives

The study was guided by the following objectives:

1. To determine the total number of journal titles in the field of social sciences and humanities at the University of Belgrade.
2. To identify ISSN and eISSN identifiers of the journals.
3. To analyze the national categorization of journals.
4. To examine the presence of Digital Object Identifier (DOI) assignments.
5. To investigate the use of Open Journal Systems (OJS) for journal management.
6. To determine inclusion in the Directory of Open Access Journals (DOAJ).
7. To identify indexing in WoS and Scopus.
8. To conduct a bibliometric comparison based on WoS and Scopus coverage.
9. To analyze the language(s) of publication of journals.

Research results

Each journal title was analyzed according to the defined research objectives. The results are presented in tables and figures in the appendix. The following section summarizes the findings.

1. *Distribution of journals by publisher*

All analyzed journals operate under the Diamond Open Access model, with publishing costs covered by academic institutions and no fees for authors or readers. Based on the national list of categorized scientific journals for 2025 (List of Categorized Scientific Journals, 2025), 46 journal titles published by faculties within the social sciences and humanities group were identified.

The journals were grouped by publishing institution to ensure clarity of distribution across faculties. The Faculty of Philology publishes the highest number of journals (16 titles), followed by the Faculty of Philosophy (13 titles) and the Faculty of Political Sciences (6 titles). Other faculties publish a smaller number of journals.

Publisher	Total number of categorized journals
Faculty of Economics	3
Faculty of Law	2
Faculty of Orthodox Theology	1
Teacher Education Faculty	2
Faculty of Security Studies	1
Faculty of Special Education and Rehabilitation	2
Faculty of Political Sciences	6
Faculty of Sports and Physical Education	1
Faculty of Philosophy	12
Faculty of Philology	16

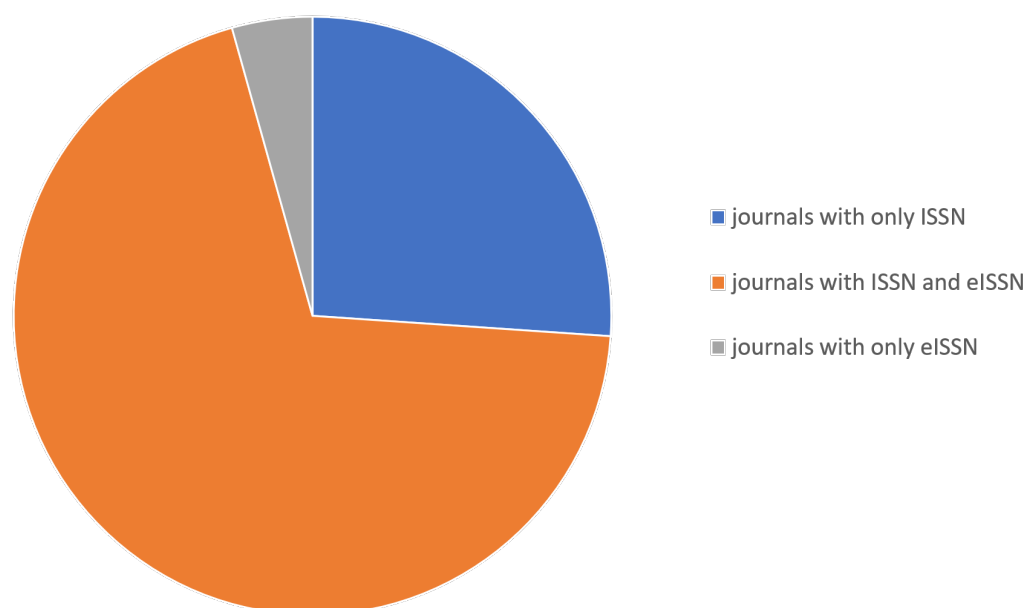
Table 1. List of publishers and the number of journals.

2. *ISSN and eISSN distribution*

The analysis shows that most journals are published in both print and electronic formats and therefore possess both ISSN and eISSN identifiers. Twelve journals are available only in print (ISSN only), while two journals are published exclusively in electronic form (eISSN only). The remaining 32 journals are available in both formats.

This distribution reflects the fact that most publishers are non-commercial academic institutions funded primarily through public resources. All electronic journals included in the sample operate under the Diamond Open Access model, without subscription fees or article processing charges. This reflects the institutional publishing practices of the University of Belgrade, where scholarly journals are supported by faculties and the University rather than commercial publishers.

Despite the advantages of electronic publishing in terms of visibility and accessibility, many Serbian journals in this field continue to maintain parallel print and electronic editions.



Graph 1. ISSN and eISSN.

3. National categorization of journals

The journals were classified according to the national categorization system. The distribution is as follows: M23 (international journal) – 9 journals; M24 (national journal of international importance) – 10 journals; M51 (leading national journal) – 16 journals; M52 (prominent national journal) – 7 journals; M53 (national journal) – 1 journal.

The classification system is influenced not only by WoS and Scopus indexing, but also by disciplinary evaluation lists and additional qualitative criteria defined by national scientific committees, including cultural and societal relevance (Rulebook on Categorization and Ranking of Scientific Journals, Official Gazette of RS 159/2020).

In recent years, indexing in WoS and Scopus has begun to influence journal categorization more significantly. Three journals: *ESP Today* (M21a), *Zograf* (M22), and *Italica Belgradensia* (M22), are placed in higher international categories and are indexed in WoS ESCI.

However, the analysis shows that WoS and Scopus indexing is not a strict requirement for obtaining the highest national categories, as only two of the nine M23 journals are indexed in these databases. Conversely, some journals achieve higher national classification despite not being indexed in WoS or Scopus.

This has influenced editorial policies, with many publishers increasingly adapting their standards to meet indexing requirements, including OA publishing.

4. DOI and research visibility

The visibility and citation impact of scientific output represent key criteria for academic promotion, institutional ranking, and participation in international research projects. Consequently, faculties acting as journal publishers increasingly recognize the importance of indexing in internationally recognized citation databases such as Web of Science (WoS) and Scopus.

A significant element in improving research visibility is the Digital Object Identifier (DOI), a persistent alphanumeric identifier assigned to digital scholarly objects (articles, book chapters, monographs, and conference papers). DOI enables stable linking and long-term accessibility of digital content. In international publishing practice, DOI assignment is typically managed through registration agencies such as Crossref.

Within the broader framework of FAIR (Findable, Accessible, Interoperable, Reusable) principles, DOI identifiers contribute directly to the “Findable” principle by providing persistent, globally unique identifiers that enable reliable discovery and machine-readable access to scholarly outputs (Wilkinson et al. 2016).

In Serbia, where many journals are published by non-profit academic institutions with limited resources, DOI registration is implemented through different mechanisms. In some cases, DOI assignment is organized via the National Library of Serbia. For example, among the 16 journals published by the Faculty of Philology, only one journal receives DOI assignment through this institutional route.

Recognizing the importance of DOI for research visibility, the Department of Library and Information Science at the Faculty of Philology, University of Belgrade initiated in 2014 the process of joining the Crossref system. Following the agreement signed in 2015, the Faculty began assigning DOI identifiers to publications issued within its journals.

Based on the analyzed dataset (see Appendix), all journals published by the Faculty of Philology are assigned DOI identifiers. Out of 46 analyzed journals, only nine do not have DOI registration. This indicates a strong awareness among publishers regarding the importance of persistent identifiers for increasing citation impact and visibility.

The analysis also shows that while DOI assignment and electronic publishing contribute to greater visibility, they are not strict prerequisites for achieving high national categorization. However, all journals indexed in WoS and Scopus within the sample are equipped with DOI identifiers, suggesting a strong correlation between DOI implementation and international indexing requirements.

5. Open Journal Systems (OJS)

Open Journal Systems (OJS) is an open-source platform designed for the management and publication of scholarly journals. It supports editorial workflows, peer review processes, and metadata management, while also enhancing transparency and discoverability of journal content.

Although OJS is the most widely used open-source journal management system, not all journals included in this study use this platform. Several journals are published through faculty websites or other institutional web platforms that provide online access to journal content but do not support the full range of editorial workflow functions available in OJS, such as online submission, peer review management, automated editorial communication, and standardized metadata export. Consequently, the publishing infrastructure varies considerably across faculties.

Despite these advantages, the adoption of OJS among journals published by the University of Belgrade remains limited. The system is predominantly used at the Faculty of Philology, where six journal titles are currently managed through OJS. It has also been adopted by individual journals published by the Faculty of Special Education and Rehabilitation and the Faculty of Political Sciences.

The choice of a publishing platform does not in itself determine the scientific quality of a journal. However, systems such as OJS facilitate standardized editorial procedures, improve metadata management, support interoperability with indexing services and repositories, and contribute to the transparency and efficiency of editorial workflows. These features may indirectly enhance the visibility and accessibility of scholarly publications.

Notably, some journals managed through OJS are also indexed in Scopus, suggesting a potential positive relationship between structured editorial systems and international visibility.

Overall, the findings indicate uneven implementation of OJS across faculties and suggest that awareness of its benefits for editorial efficiency, metadata standardization, and indexing potential is still developing within the academic publishing landscape in Serbia.

6. *Directory of Open Access Journals (DOAJ)*

The Directory of Open Access Journals (DOAJ) is an international indexing service that provides access to peer-reviewed OA journals across disciplines. Its main objective is to increase the visibility, accessibility, and impact of high-quality OA scholarly publishing worldwide (DOAJ n.d.).

At present, DOAJ indexes 213 journals from Serbia, including 19 journals included in this study. This indicates that more than half of the analyzed electronic journals are represented in this database.

However, a considerable number of OA journals are still not indexed in DOAJ, despite meeting basic technical requirements. This suggests that editorial boards may not always be fully aware of the submission and inclusion procedures, as well as the benefits that DOAJ indexing brings in terms of international visibility and credibility. This situation also reflects broader developments in open access publishing, where visibility increasingly depends on inclusion in recognized international indexing systems.

7. *WoS and Scopus indexing*

WoS and Scopus are among the most influential international citation and bibliographic databases. WoS, developed by the Institute for Scientific Information (ISI), includes multiple citation indexes (SCI, SSCI, AHCI), while ESCI includes journals undergoing evaluation. Despite its global relevance, WoS has been criticized for linguistic and geographical biases.

Scopus, developed by Elsevier, was introduced in 2004 as a broader alternative with more inclusive indexing criteria and greater coverage of non-English publications.

Journals in the field of social sciences and humanities in Serbia are predominantly published in the Serbian language and often address nationally oriented research topics. This limits their international visibility and reduces their likelihood of inclusion in WoS and Scopus, which remain the most commonly used databases in national research evaluation practices.

Out of 46 analyzed journals, only four are indexed in WoS: *Zograf* (A&HCI), and *ESP Today*, *Etnoantropološki problemi*, and *Italica Belgradensia* (ESCI). In Scopus, six journals are indexed: *Economic Annals*, *ESP Today*, *Specijalna edukacija i rehabilitacija*, *Journal of Regional Security*, *Knjiženstvo* and *Zograf*. Only *Zograf* and *ESP Today* are indexed in both databases.

However, citation database coverage should be interpreted as one of several indicators of research visibility and journal performance, particularly in light of recent developments in research assess-

ment frameworks such as COARA (CoARA 2022), which emphasize broader and more responsible evaluation criteria beyond bibliometric indicators.

8. Diamond Discovery Hub (DDH) analysis

To complement the analysis of international indexing databases, the Diamond Discovery Hub (DDH) was also used in this study as an additional tool for examining the visibility of journals within the European Diamond Open Access framework (European Diamond Capacity Hub, 2025).

The DDH database gives an overview of journals that are part of the Diamond publishing ecosystem and their presence within European initiatives supporting this model. In this study, it was used to check how visible the selected journals are in this system.

The results show that 19 out of 46 journals in the sample are included in the DDH database. The remaining journals are not yet listed, which suggests that their integration into the European Diamond Open Access framework is still uneven.

9. Bibliometric comparison

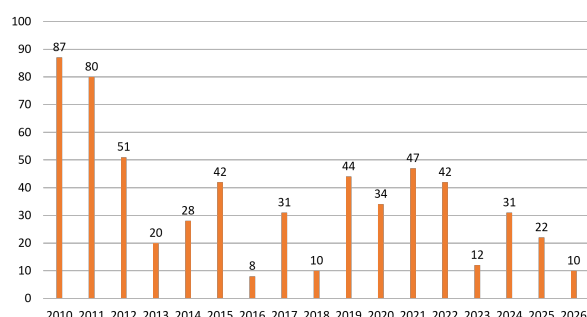
WoS and Scopus, in addition to providing bibliographic records of scholarly publications, also represent important tools for bibliometric analysis and research evaluation. In this phase of the study, a comparative bibliometric analysis was conducted on a selected sample of two journals, based on their visibility and citation indicators in these databases. The analysis covers the period from 2010 to 2026 for data retrieved from the Web of Science Core Collection, while Scopus data were available for the period from 2012 to 2026 due to database coverage limitations.

The comparison was carried out between the journal *Zograf* (ISSN 0350-1361 / eISSN 2406-0755), indexed in both WoS and Scopus and available in OA, and the journal *Srpski jezik – studije srpske i slovenske* (ISSN 0354-9259), which is not indexed in WoS or Scopus and is not available in OA.

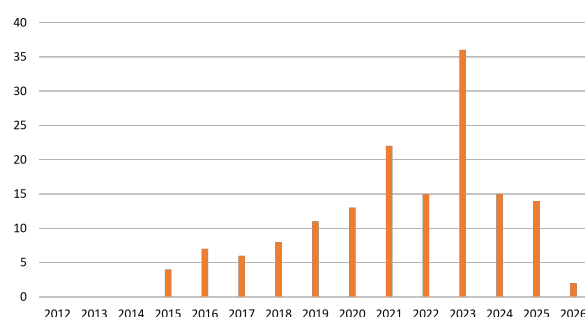
Given its inclusion in both citation databases, it was assumed that *Zograf* would demonstrate a higher citation impact compared to *Srpski jezik – studije srpske i slovenske*. This assumption was verified through searches conducted in the WoS and Scopus databases.

Zograf is published by the Institute of Art History at the Faculty of Philosophy, University of Belgrade, and has been continuously published since 1966. The journal is issued annually in both print and electronic formats and has been available in OA since 2002.

According to data retrieved from the Web of Science Core Collection, publications indexed in *Zograf* have been cited 599 times within the observed period. Scopus records 153 citations for the same journal.



Graph 2. Zograf in WoS.



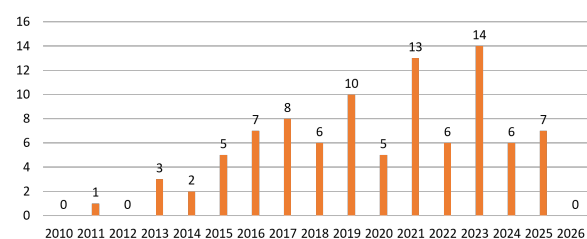
Graph 3. Zograf in Scopus.

In contrast, *Srpski jezik – studije srpske i slovenske* is a scientific journal published in print form since 1996. It is issued annually and does not have an electronic edition, nor is it indexed in the Web of Science or Scopus citation databases. The journal focuses on Serbian language studies, and its primary audience includes researchers from Serbia and the broader region, as well as Slavic scholars.

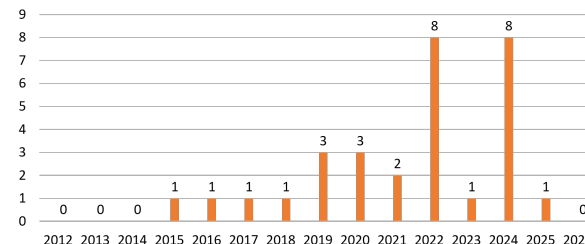
Citation data for this journal were obtained using the Cited Reference Search option in the Web of Science database, which enables the identification of citations to sources that are not themselves indexed in WoS. According to these data, publications from this journal have been cited 93 times in WoS-indexed sources, while Scopus records 30 citations.

It should also be noted that the journal title *Srpski jezik – studije srpske i slovenske* appears in various abbreviated and inconsistent forms in reference lists, which may have affected the completeness of the retrieved citation data. Due to the length and variability of the journal title, as well as differences in citation practices (such as abbreviations, omission of subtitles, and inconsistencies in diacritics), some citations may not have been captured fully in the databases.

The results indicate that journals with higher visibility in international citation databases tend to achieve higher citation rates. Additionally, the availability of publications in OA and the use of persistent identifiers such as DOIs contribute to increased visibility and potential citation impact. However, these findings should be interpreted with caution, as differences in database coverage and indexing practices may influence citation counts, particularly in the case of non-indexed journals. These results mainly reflect differences in database coverage rather than differences in journal quality.



Graph 4. Srpski jezik in WoS.



Graph 5. Srpski jezik in Scopus.

10. *Language(s) of publication*

The analysis of the language(s) of publication shows that the majority of journals included in the sample are bilingual, publishing in Serbian and English. While Serbian remains the dominant language, English is regularly used to publish individual articles or entire issues, particularly in journals aiming to increase international visibility and indexing potential.

A smaller number of journals publish exclusively or predominantly in Serbian. These are mainly journals with a strong focus on national literature, linguistics, cultural studies, or related fields in which Serbian is the primary language of scholarly communication.

In addition, a limited use of other languages was identified. These cases are found exclusively within journals published by the Faculty of Philology, where additional European languages are occasionally used alongside Serbian and English.

Overall, the findings indicate a predominantly bilingual publishing model (Serbian–English), with a limited but meaningful presence of additional languages in a small number of journals.

Conclusion

This study examined OA publishing practices within scientific journals at the University of Belgrade, with a particular focus on the field of social sciences and humanities. The analysis combined bibliometric indicators, journal infrastructure characteristics, and international indexing coverage.

The overall findings indicate that OA publishing has become an established component of scholarly communication in the observed context, particularly in terms of improving journal visibility and dissemination. Most journals operate under the diamond OA model and are available in both print and electronic formats, although full digital transformation remains limited.

At the same time, the study reveals uneven development of key publishing infrastructures, including Digital Object Identifiers (DOIs) and journal management systems such as Open Journal Systems (OJS). While these tools are widely recognized as essential for improving visibility and integration into international scholarly communication systems, their implementation is still inconsistent across institutions.

International indexing analysis shows that only a limited number of journals from the University of Belgrade are included in Web of Science and Scopus databases, reflecting both disciplinary characteristics and broader challenges related to internationalization, language of publication, and editorial standards. These factors collectively influence the global visibility of journals in the humanities and social sciences.

Within this broader context, a comparative bibliometric analysis of two selected journals was conducted as a case study of citation visibility. The results show a clear difference in citation performance between *Zograf*, indexed in both Web of Science and Scopus, and *Srpski jezik – studije srpske i slovenske*, which is not indexed in these databases. This difference reflects the role of database coverage and indexing visibility in shaping measurable citation impact.

However, the analysis also indicates that citation data for non-indexed journals may be underestimated due to variations in reference formatting, abbreviation practices, and limitations of reference-based retrieval methods. This highlights important methodological constraints in bibliomet-

ric research, particularly in the humanities, where citation practices are less standardized.

Overall, the study suggests that indexing coverage, OA availability, and citation performance are interrelated factors that jointly influence journal visibility. Strengthening standardized publishing infrastructures, improving metadata quality, and further aligning journals with international open science frameworks may contribute to greater visibility and integration of journals into global scholarly communication systems.

These findings should be interpreted as part of a broader structural analysis of scholarly publishing practices, rather than being limited to individual journal performance.

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Appendix

The table presents the dataset used in the analysis, including the following variables: publisher (faculty), journal title, ISSN, eISSN, national journal category, DOI assignment, use of Open Journal Systems (OJS), inclusion in the Directory of Open Access Journals (DOAJ), indexing in Web of Science (WoS) and Scopus databases, and language(s) of publications.

Journal titles are listed in their original form. Serbian-language titles are presented in Latin script, while English-language titles are given in English only. Bilingual titles are presented in both language versions.

The dataset served as the basis for the analysis and for the interpretation of the results presented in this study.

<i>Publisher</i>	<i>Title</i>	<i>ISSN eISSN</i>	<i>National category</i>	<i>equipped with a doi</i>	<i>OJS plat- form</i>	<i>DOAJ</i>	<i>indexed in WoS/Scopus</i>	<i>Language(s) of publ.</i>
Faculty of Economics	Ekonomski anali = Economic Annals	0013-3264 1820-7375	M24	yes	no	yes	Scopus	Serbian / English
Faculty of Economics	Ekonomske ideje i praksa	2217-6217 2738-1129	M52	yes	no	no	-	Serbian / English
Faculty of Economics	ESP Today	- 2334-9050	M21a	yes	no	yes	Web of Science-ESCI Scopus	Serbian / English
Faculty of Law	Anali Pravnog fakulteta u Beogradu = The Annals of the Faculty of Law in Belgrade	0003-2565 2406-2693	M23	yes	no	yes	-	Serbian / English
Faculty of Law	Crimen	2217-219X 2683-5800	M51	yes	no	yes	-	Serbian / English
Faculty of Orthodox Theology	Bogoslovlje = Theology	0006-5714 2560-4945	M51	yes	no	no	-	Serbian / English
Teacher Education Faculty	Inovacije u nastavi – časopis za savremenu nastavu	0352-2334 2335-0806	M23	yes	no	yes	-	Serbian / English
Teacher Education Faculty	Metodička teorija i praksa	0354-9801 -	M51	no	no	no	-	Serbian / English
Faculty of Security Studies	Godišnjak fakulteta bezbednosti = Annual Faculty of Security Studies	1821-150X 2683-5738	M52	yes	no	yes	-	Serbian / English
Faculty of Special Education and Rehabilitation	Beogradska defektološka škola = Belgrades school of defectology	0354-8759 -	M52	no	no	no	-	Serbian / English
Faculty of Special Education and Rehabilitation	Specijalna edukacija i rehabilitacija	1452-7367 2406-1328	M51	yes	yes	yes	Scopus	Serbian / English

Faculty of Political Sciences	CM: Communication and Media	2466-541X 2466-5452	M24	no	no	yes	-	Serbian / English
Faculty of Political Sciences	Journal of Regional Security	2217-995X 2406-0364	M23	yes	yes	yes	Scopus	Serbian / English
Faculty of Political Sciences	Političke perspektive	2217-561X 2335-027X	M24	yes	yes	yes	-	Serbian / English
Faculty of Political Sciences	Godišnjak Fakulteta političkih nauka	1820-6700 -	M51	no	yes	no	-	Serbian / English
Faculty of Political Sciences	Politički život	2217-7000 -	M51	yes	no	no	-	Serbian / English
Faculty of Political Sciences	Genero	1451-2203 2620-181X	M51	yes	no	yes	-	Serbian / English
Faculty of Sports and Physical Education	Fizička kultura	0350-3828 2217-947X	M24	yes	no	yes	-	Serbian / English
Faculty of Philosophy	Filozofski godišnjak = Belgrade Philosophical Annual	0353-3891 2956-0357	M24	yes	no	no	-	Serbian / English
Faculty of Philosophy	Etnoantropološki problemi	0353-1589 2334-8801	M23	yes	no	yes	Web of Science ESCI	Serbian / English
Faculty of Philosophy	Zbornik seminara za studije moderne umetnosti	2217-3951 2738-1528	M24	yes	no	no	-	Serbian / English
Faculty of Philosophy	Srpske studije	2217-5687 -	M24	no	no	no	-	Serbian / English
Faculty of Philosophy	Lucida intervalla	1450-6645 -	M24	no	no	no	-	Serbian / English
Faculty of Philosophy	Antropologija	1452-7243 2334-881X	M51	no	no	no	-	Serbian / English
Faculty of Philosophy	Beogradski istorijski glasnik = Belgrade Historical Review	2217-4338 -	M51	no	no	no	-	Serbian / English
Faculty of Philosophy	Stari srpski arhiv	1451-3072 -	M52	no	no	no	-	Serbian / English
Faculty of Philosophy	Zograf	0350-1361 2406-0755	M22	yes	no	yes	Web of Science A&HCI Scopus	Serbian / English
Faculty of Philosophy	Andragoške studije = Andragogical Studies : journal for the Study of Adult Education and Learning	0354-5415 2466-4537	M23	yes	no	no	-	Serbian / English
Faculty of Philosophy	Psihološka istraživanja	0352-7379 2560-306X	M23	yes	no	yes	-	Serbian / English

Faculty of Philosophy	Nastava i vaspitanje = Studies in Teaching and Education	0547-3330 2560-3051	M23	yes	no	yes	-	Serbian / English
Faculty of Philology	Srpski jezik – studije srpske i slovenske	0354-9259 -	M23	yes	no	no	-	Serbian
Faculty of Philology	Prilozi za književnost, jezik, istoriju i folklor	0350-6673 2406-0798	M23	yes	no	no	-	Serbian
Faculty of Philology	Anali Filološkog fakulteta = Annals of the Faculty of Philology	0522-8468 2787-1037	M24	yes	yes	yes	-	Serbian / English
Faculty of Philology	Naučni sastanak slavista u Vukove dane	0351-9066 -	M51	yes	no	no	-	Serbian
Faculty of Philology	Philologia	1451-5342 1820-5682	M52	yes	yes	yes	-	Serbian / English / French / German / Italian
Faculty of Philology	Slavistika	1450-5061 2738-1358	M51	yes	no	no	-	Serbian / Russian / English
Faculty of Philology	Filološki pregled	0015-1807 -	M51	yes	no	no	-	Serbian / English
Faculty of Philology	Belgrade English Language & Literature Studies	1821-3138 1821-4827	M51	yes	yes	no	-	Serbian / English
Faculty of Philology	Godišnjak Katedre za srpsku književnost sa jugoslovenskim književnostima	1820-5305 -	M51	yes	no	no	-	Serbian
Faculty of Philology	Živi jezici	0514-7743 2787-3161	M53	yes	yes	no	-	Serbian / English
Faculty of Philology	Primenjena lingvistika	1451-7124 -	M51	yes	no	no	-	Serbian / English
Faculty of Philology	Knjiženstvo	- 2217-7809	M24	yes	yes	no	Scopus	Serbian / English
Faculty of Philology	Slovenika	2466-555X 2466-2852	M52	yes	no	yes	-	Serbian / Slovenian / English
Faculty of Philology	Italica Belgradensia	0353-4766 2812-877X	M22	yes	no	no	Web of Science ESCI	Italian / English
Faculty of Philology	Folkloristika	2560-4414 2560-3191	M51	yes	no	no	-	Serbian / English
Faculty of Philology	Infoteka = Infotheca	1450-9687 2217-9461	M52	yes	yes	no	-	Serbian / English

KORMARC in the cataloging of rare works: brief historical and documentary observations between MARC21 in Brazil and KORMARC in South Korea*

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ABSTRACT

The Korean Record Management Standards (KORMARC) format, first published in 1993, is the standard for cataloging collections in most information units in South Korea. The institution is distinguished by its efforts to preserve and make accessible rare and antique works originating from the country's ancient culture. The objective of this article is to facilitate a comprehensive understanding of KORMARC's application in the cataloging of rare works. To this end, it offers brief comparisons with MARC21, the standard most used in Brazil today. An investigation was conducted into its history and conceptual characteristics, and an examination was made of the most used bibliographic record fields for rare works in both standards. This article employs a qualitative and exploratory approach, with data collection procedures that include bibliographic and documentary methods. It was concluded that the main differences that KORMARC can offer for the cataloging of rare works are some specific fields, the way other fields are used, and that the cataloging of rare works in Brazil can evolve with the adaptation of some fields and with an understanding of the complexity of the concept of rare works.

KEYWORDS

MARC21; KORMARC; Cataloging; Rare works.

* As will be explained in greater detail in the introduction, this article has chosen to use the term “rare works” and the word “work” primarily in the sense of “rare item,” as this is a convention within the field of rare collections studies; this clarification is necessary due to the difference in the meaning of the word “work” in the bibliographies of the two fields discussed here.

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Introduction

Cataloging, in its simplest form, is defined as the description of items within a collection, including the gathering of information about them, their authors, and, most importantly, their characteristics. Mey (1995) argues that cataloging, beyond merely listing items in a collection, also individualizes them, rendering each item unique within that context while enabling the grouping of items according to their similarities within the catalog.

The catalog, in turn, is understood by the *Declaration of International Cataloging Principles* (IFLA 2016) as an effective and efficient instrument that enables users to find bibliographic resources, identify a bibliographic resource or entity, select the resource that best meets their needs, acquire or obtain access to the sought item, and navigate and explore resources within the catalog.

Over time and with technological advances, it became important for catalogs and the bibliographic records that comprise them to be created and consulted using electronic devices, which have become increasingly present in everyday life. This context gave rise to one of the formats still widely used in cataloging by many institutions and countries, namely MARC, which enabled the creation of collection records through the use of machine-readable characters, fields, indicators, and subfields (Furrie 1999).

In their work, Martínez García and Olan Múgica (2011) point out that MARC has become one of the most widely used standards worldwide because it is implemented in major national libraries, despite not having originated from international standards or being the product of an international agreement. This widespread adoption has contributed to future global interoperability among libraries. Similarly, Modesto (2009) notes that some countries, such as Brazil, chose to adopt MARC directly and use MARC21, while others introduced modifications in order to preserve national cataloging traditions, as in the case of South Korea.

MARC21 and its derivatives enable the sharing of records among units, facilitate the exchange of bibliographic metadata, and reduce rework within information units. In addition, they support the formation of cooperative networks and contribute to the standardization of bibliographic records (Avram 2009). Despite the emergence of other formats, the broad applicability and the benefits outlined above justify the inclusion of MARC21 within the scope of this article.

Since the 1960s, following the creation of the first MARC format, discussions have taken place regarding the international standardization of metadata, with particular concern focused on the variations of the format that have emerged in different countries (Rowley 2002). In these adaptations, each region sought to address local issues related to the representation of bibliographic data that were not covered by the international standard.

Thus, the study of the different variations derived from MARC makes it possible to understand and analyze the solutions adopted by each community, while also contributing to critical reflection on how the fields, subfields, and indicators of MARC21 are currently used in Brazil. *The Korean Machine Readable Catalog* or *Korean Literature Automation List*, also known by the acronym KOR-MARC, is one of these MARC-derived versions and constitutes the primary object of analysis in this article.

The KORMARC format, published in 1993, is used to catalog a wide range of material types and formats in most information units in South Korea (National Library of Korea 2014). Its prominence in the representation of rare and ancient works derives from efforts to preserve, make

available and provide user access to these millennia-old materials. This process is closely related to the country's cultural practices and the documentation of nationally produced knowledge, which has been increasingly disseminated and sought by students, researchers, and scholars of Korean culture.

According to the *Korean Old and Rare Collection Information System* (National Library of Korea 2021), KORMARC for old literature is defined as a set of rules that enable the standardized processing of works with regard to cataloging methods for antique literature. KORMARC was also selected because, during the bibliographic research described in the methodology, no Brazilian articles on cataloging practices in South Korea were identified. By contrast, there is a substantial body of international research on KORMARC, particularly in South Korea, its country of origin. The comparison between MARC21, used in Brazil, and KORMARC, used in South Korea, is intended to encourage professionals to consider the possibility of adapting bibliographic records to incorporate local needs, based on an international example that features very strong cultural aspects. The comparison focused on rare books due to the lack of attention paid to the details required for cataloging this type of material in Brazil. The need for a high level of detail makes the cataloging of rare books more labor-intensive and, consequently, less desirable and less likely to be chosen by catalogers in general, who tend to opt for simpler cataloging (Sundström and Silva 2018).

In this sense, Burym and Christophers (1993, X) emphasize that “the librarian’s purpose in cataloging old and rare books is not merely to describe an old object but, more importantly, to convey the text and the features that distinguish editions”. Accordingly, the study of solutions developed in contexts that demonstrate greater affinity with this type of collection and its technical processing can be highly beneficial. Through the exchange of information and experiences, it becomes possible to improve the practices and standards adopted, thereby contributing to greater efficiency. Considering the emphasis on the representation of rare works, this article aims to present KORMARC, the standard used in South Korea, by briefly highlighting some similarities and differences in relation to the Brazilian standard. To achieve this objective, it is necessary to understand KORMARC from both historical and conceptual perspectives and to identify the fields most commonly used for the cataloging of rare books in South Korea and Brazil.

It is important to note that there are terminological inconsistencies that become evident when we combine the literature on rare works with the literature on cataloging. Perhaps the main inconsistency is the use of the word “work.” While, within the bibliography devoted to rare collections, some may use “work” as a synonym for “item” in expressions such as “rare work” and “work of art,” conveying the idea that an item or a collection is rare, others — the most recent cataloging standards and theories — use “work” to refer to the intellectual or artistic content found within an “item.” This current understanding of the concept of “work” in cataloging was strongly influenced by the Functional Requirements for Bibliographic Records (FRBR) conceptual model, first published in 1998, and consolidated by the IFLA Library Reference Model (IFLA LRM) (Riva, Le Boëuf, Maja Žumer 2017), published in 2017 to replace FRBR.

Both fields of study—cataloging and “rare works”—have their own traditions and theoretical frameworks, and an in-depth discussion of terminological differences or even a redefinition of the concept of “rare work” based on the IFLA LRM is not the objective of this paper. Thus, the term “work” is used here to refer primarily to a rare item or a collection containing such rare items,

with a view to the stability the term carries within Brazilian — and even international — library studies, and so that this article may be understood by professionals in both fields.

Rare Works

An information unit that maintains a rare collection requires the ongoing selection of items to be included in that collection, and the criteria typically applied depend on factors such as the focus of the information unit and the interests of its users. According to Schweitzer (2018), “there is no single formula for determining the rarity of a book that is universally accepted across all times and places” (34). This is because the rarity of a work depends on the context in which it is situated, who evaluates it, and its significance for a particular community (Pinheiro 2016).

Rodrigues (2006) notes that rare books include both works that are relevant to a specific field of knowledge and titles that are significant to a nation, its historical development, and the local community. Santos (2015) supports this view by arguing that definitions of rarity vary from country to country due to differences in social and political formations, as well as variations in the development of graphic production within their territories, which may also differ among institutions within the same country.

Despite the variability in the definition of rare works and in the criteria institutions may adopt for their selection, certain criteria are more frequently applied. These include historical relevance and chronological limitation, cultural value, difficulty of acquisition, and bibliological aspects such as illustrations, production methods, and materials used, as well as peculiarities, precious qualities, rarities, and curiosities of specific copies (Rodrigues 2006; Pinheiro 1996).

Especially considering that KORMARC excels in representing the old and rare works, it is essential in this study to highlight the distinction between rare works and old works. Although some authors use these terms interchangeably, Moraes (1998) proposes criteria to differentiate them, with the principal one being demanded for the work. According to the author, what renders a work rare is the extent to which it is sought after, in addition to the set of factors and particularities inherent to each work.

The cataloging of rare and antique works also differs in the quantity and variety of fields and information included in the record. While antique works tend to resemble modern works, rare works require a greater degree of exhaustiveness in cataloging, particularly with respect to their physical and bibliographic characteristics and, above all, the historical and cultural context that surrounds them (Sundström and Silva 2018). In your work, (Silva 2023) highlights the verification of a work’s rarity as the first step in the process of bibliographic cataloging of rare works, which requires the professional to take a keen look at aspects related to manufacturing and production processes, historical, cultural, and social contexts, as well as physical characteristics and the significance of the subject matter.

In Brazil, each institution has the autonomy to define the level of specification applied to the bibliographic records of rare books. As a result, there is considerable diversity in policies and perspectives regarding the technical treatment of these materials. Examples include the *Manual para entrada de dados bibliográficos em formato MARC21: ênfase em obras raras e especiais*, da Universidade Federal de Minas Gerais (*Manual for Entering Bibliographic Data in MARC21 Format: Emphasis on Rare and Special Works* from the Federal University of Minas Gerais) (Mes-

sina-Ramos 2009), the *Manual de Catalogação de Obras Raras da UFRJ*, da Universidade Federal do Rio de Janeiro (*Cataloging Manual for Rare Books* from the Federal University of Rio de Janeiro) (Silva 2023), and the o Padrão para inserção de dados na base bibliográfica do sistema de bibliotecas da UFF: obras raras da Universidade Federal Fluminense (*Standard for Inserting Data into the Bibliographic Database of the UFF Library System: Rare Books* from the Federal Fluminense University) (Superintendência de Documentação 2015).

To develop the manuals and internal policies used by institutions, it is common for established standards and guidelines to serve as a foundation, alongside the criteria that each institution considers necessary for the cataloging of rare works. Silva (2023) notes that the *Anglo American Cataloguing Rules*, AACR2, the *International Standard Bibliographic Description for Old Monographs*, ISBD A, *Machine Readable Cataloging*, MARC21, and *Descriptive Cataloging of Rare Materials*, DCRM, are commonly used for this purpose, in addition to the Plano Nacional de Recuperação de Obras Raras, PLANOR (National Plan for the recovery of rare works) (Governo Federal, and Fundação Biblioteca Nacional n.d.).

Challenges related to the cataloging of rare books in Brazil include issues in the management of financial resources, the costs associated with maintaining rare collections, the scarcity of information in bibliographic records, limited institutional interest from authorities responsible for information units, and insufficient professional training in librarianship (Pinheiro 1990; Sundström and Silva 2018). Viana and Lourenço (2025), in their study examining the relationship between the RDA and the DCRM with the cataloging of rare books, noted that there is a scarcity of Brazilian publications on topics related to the cataloging of rare books and that providing more detailed descriptions in the cataloging process may be the solution to bringing visibility to these collections. In South Korea, the cataloging of rare works has been promoted through initiatives aimed at the preservation and conservation of Korean culture. These efforts have gained momentum alongside the growing global popularity of South Korea across multiple spheres. Such initiatives include the *Digital Library of Korean Literature*¹ (Literature Translation Institute of Korea n.d.), the *Korean Association for the Preservation of Old Books* (KAPOB), and the *Korean Old Rare Collection Information System* (KORCIS) (National Library of Korea 2021).

In addition, numerous museums throughout the country, as well as universities and institutions abroad, maintain Korean collections. Examples include the University of Oxford, the University of Washington, Columbia University, Harvard Yenching Library, and the Library of Congress. These and other institutions rely on KORCIS for the technical processing of their materials in order to make them available through the Comprehensive Catalog of Old Korean Documents (National Library of Korea 2021).

With regard to institutional policies on the cataloging of rare books in South Korea, relatively little is known, as cataloging practices in the country remain in constant development, much as in Brazil. Scholarly works by Lee and Kim (2006), Lee (2009; 2010), and Rho and Lee (2014; 2022) address necessary improvements to KORMARC in relation to the cataloging of both modern and rare works. These studies primarily focus on enhancements to specific fields, broader updates and revisions, and research concerning the planning of the inclusion or adaptation of RDA within KORMARC.

¹ <http://library.litkorea.or.kr/>

Methodology

Several methodological procedures were employed in this study in order to arrive at the results presented in the following section. In terms of approach, the article is characterized as qualitative and exploratory and is based on bibliographic and documentary research analyzed using Bardin's approach (2011).

The study has an exploratory character, as it investigates a subject with the aim of making it better known and of providing additional information, in this case KORMARC, which constitutes the object of analysis. Exploratory research is understood as research whose purpose is to present information on a given topic or to introduce new perspectives on the subject under examination (Prodanov and Freitas 2012).

The qualitative approach is justified by the descriptive nature of the data, which were collected through bibliographic research and documentary analysis. These procedures were combined with the comparative method, making it possible to examine similarities and differences between the objects and societies analyzed in this article (Marconi and Lakatos 2003).

The authors further note that “the comparative method is used both for comparisons of groups in the present, in the past, or between existing and past groups, as well as between societies at similar or different stages of development”. This approach is beneficial to the advancement of rare book cataloging in Brazil, as it allows the adoption of practices developed in other societies, in this case South Korea.

Accordingly, the first step consisted of conducting a bibliographic survey based on previously published material (Prodanov and Freitas 2012). The search term “KORMARC” was applied to the following Brazilian databases: BRACPI, SciELO, and BDTD, yielding zero results in all three. The same term was used in the following international databases: Emerald, Mendeley, KCI, and KoreaScience, resulting in 10, 25, 20, and 90 academic works on the topic, respectively.

Regarding data collection procedures, documentary research was conducted using KORMARC (National Library of Korea 2014), bibliographic MARC 21 (Network Development and MARC Standards Office and Library of Congress 1999), the *Manual for Bibliographic Data Entry in MARC 21 Format with Emphasis on Rare and Special Works* (Messina-Ramos 2009), and the *Standard for Data Insertion in the Bibliographic Database of the UFF Library System: Rare Works* (Superintendence of Documentation 2015) as sources for the theoretical framework and analysis. According to Sá-Silva et al. (2009), the use of documents supports the historical and sociocultural contextualization of the research topic, which is particularly important for this article, as it seeks to place side by side two standards adopted in different countries.

The analysis will be structured to present the fields most frequently used in the cataloging of rare works in Brazil, which will be displayed in table 1 to facilitate understanding, followed by brief considerations on these fields. The same logic and sequence will be applied to the fields used in the cataloging of rare works in South Korea, which will be presented in table 2.

Finally, table 3 will highlight the differences identified between the fields most commonly used for cataloging rare works in the two standards. This table will summarize the findings and, since it will not be possible to discuss all distinguishing fields, only selected fields will be examined in greater detail.

KORMARC

Designed to accommodate bibliographic information from books, whether printed or digital, electronic materials, cartographic materials, audio and video recordings, old books, and continuing resources, the KORMARC format was created in the 1980s (National Library of Korea 2014).

At that time, computers were becoming indispensable in libraries throughout the country, and the format was developed with consideration for both the cataloging rules already in use and the MARC formats created by the Library of Congress, which had already gained global relevance. This approach aimed to enable the conversion of bibliographic data and to support global interoperability (Doh 2002).

The placement of KORMARC within the history of MARC formats will be illustrated in the timeline presented in Figure 1, where the broader MARC developments are represented by a gray line and KORMARC by a red line.

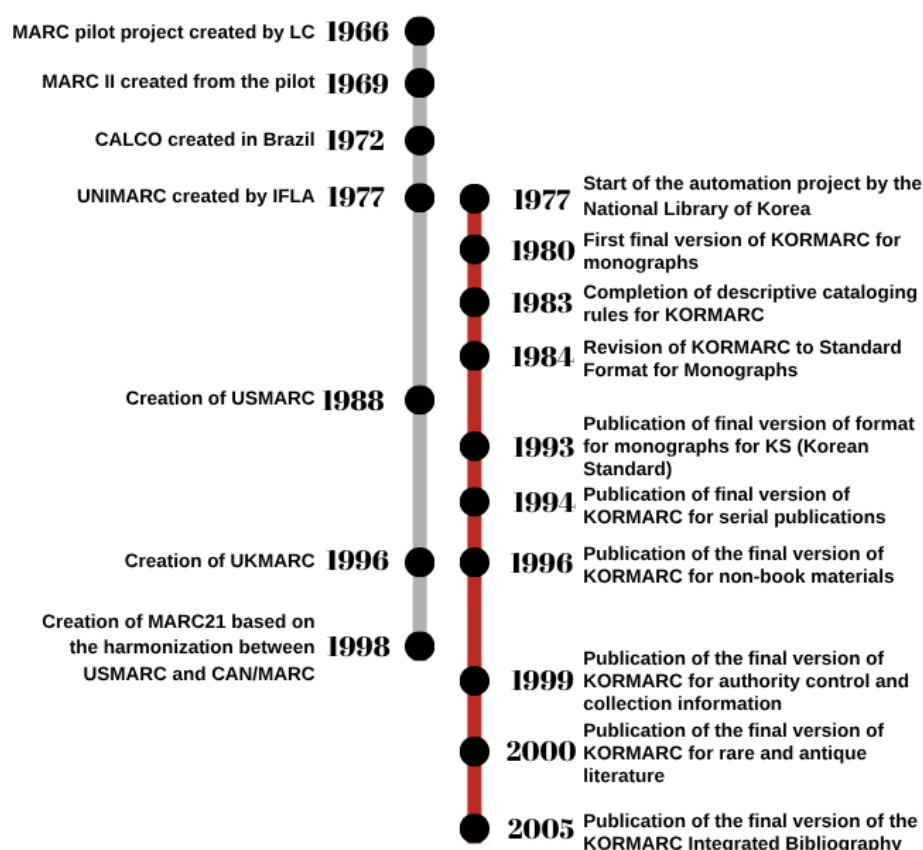


Figure 1. KORMARC timeline. Source: own elaboration.

As Oh (1992) notes, the final version of KORMARC for monographs, represented in the timeline, was the first format created in the country and was primarily based on LC MARC, also known as MARC II. This format later evolved into USMARC and, together with CAN MARC, subsequently gave rise to MARC21, which is currently used in Brazil (Furrie 1999; Assumpção and Santos 2015).

With regard to the structure of KORMARC, Oh (1992) explains that it is composed of five parts: the Leader, the Directory, the Control Fields, the Variable Fields, and the Record Terminator. This structure reflects the foundations upon which KORMARC was developed, namely the International Standard Bibliographic Description, AACR2, USMARC, and the Korean Cataloging Rules. The latter are currently in their fourth edition and closely resemble AACR2 (Li 2017; Korean Library Association and Cataloguing Committee 2002).

Currently, the objectives of KORMARC include providing data to facilitate the exchange of bibliographic records among library systems, enabling data exchange among different types of materials, and, most importantly, converting bibliographic records into machine readable form for the creation of physical and digital library catalogs (National Library of Korea 2014).

KORMARC shares similarities with other MARC formats, particularly the American MARC, currently known as MARC 21, which served as the basis for its development. However, certain characteristics distinguish it from other formats. Examples include characters 26 and 27 of field 008, which refer to publications from Korean universities, and characters 38 and 39 of field 008, which refer to publications issued by the Korean government (Oh 1992).

In addition, differences can be observed in the use of specific fields, subfields, and indicators. Field 045 contains a more detailed table for encoding dates. Subfields related to chronology, such as the \$y subfield of fields 650 and 651, may be used to indicate dynasties. Furthermore, the first indicator with value 3 in fields 100, 600, 700, and 800, which denotes a family name, is commonly used, reflecting the importance of family in Korean culture (National Library of Korea 2014).

Discussion of Results

Based on the *Manual for Entering Bibliographic Data in MARC21 Format: Emphasis on Rare and Special Works* (Messina-Ramos 2009) and the *Standard for Data Insertion in the Bibliographic Database of the UFF Library System: Rare Works* (Superintendence of Documentation 2015), the fields commonly used in Brazil for the description of rare works, as presented in table 1, can be identified as follows.

Field type	Field
Control	001 – Control number 003 – Control number identifier 005 – Date and time of last transaction 006 – Fixed extension data elements – Additional material 008 – Fixed extension data elements
Numbers and codes	020 – ISBN number 022 – ISSN number 040 – Cataloging source 041 – Language code 043 – Geographic area code 045 – Chronological period code 080 – Universal decimal classification (CDU) number 082 – Dewey decimal classification (CDD) number 084 – Other Classification Number 090 – Local call number

Main entry	100 – Main entry – Personal name 110 – Main entry – Corporate name 111 – Main entry – Meeting name 130 – Main entry – Uniform title
Title	240 – Uniform title 245 – Title statement 246 – Variant form of title
Edition and printer	250 – Edition 260 – Publication, distribution etc.
Physical description	300 – Physical description
Series	490 – Series indication
Notes	500 – General note 501 – Note with: 502 – Dissertation note 504 – Bibliography note, etc. 505 – Formatted content note 520 – Summary note 533 – Reproduction note 534 – Original version note 541 – Acquisition note 546 – Language note 550 – Edition information note 583 – Processing note 590 – Location note
Subject access point	600 – Subject Added Entry – Personal name 610 – Subject Added Entry – Corporate Name 611 – Subject Added Entry – Meeting Name 630 – Subject Added Entry – Uniform title 650 – Subject Added Entry – Topic subject 651 – Subject Added Entry – Geographic name
Secondary entry	700 – Added entry – Personal name 710 – Added entry – Name of entity 711 – Added entry – Name of event 730 – Added entry – Uniform title 740 – Added entry – Related and analytical title not controlled 800 – Added entry for series – Personal name 810 – Added entry for series – Name of entity 811 – Added entry for series – Name of event 830 – Added entry for series – Uniform title
Location	856 – Electronic access and location

Table 1. Fields commonly used in cataloging rare works in Brazil. Source: own elaboration.

It is evident that most of the fields presented may be used in any type of cataloging, whether the work in question is old, rare, or modern, since they correspond to the minimum elements required for second level cataloging, according to rule 1.0D2, Second Level of Description, of AACR2 (Joint Steering Committee for Revision of AACR 2021), which served as the basis for the MARC21 format.

The fields 541 (Acquisition note), 550 (Edition information note), and 583 (Processing note) stand out as distinguishing elements between modern and rare works, in addition to variable fields that are used only when required by the characteristics of the item, such as note fields and secondary entry fields.

Based on the *Guide on Cataloging Old and Rare Collections for Librarians* published by the National Library of Korea (Bong et al. 2020) and on information provided by the *International Network for Korean Studies Librarians of the National Library of Korea* through personal communication,² it was possible to identify the most frequently used fields. These fields are presented in table 2.

Field type	Field
Control	001 – Control number 005 – Date of last processing 006 – Encoding information field – Additional data 007 – Technical fields 008 – Encoding information field
Numbers and codes	012 – Korean National Library control number 020 – ISBN number 035 – Partner organization control number 040 – Cataloging source 041 – Language code 049 – Content code 052 – National Library of Korea claim symbol 056 – Korean decimal classification symbol 080 – International decimal classification (CDU) 082 – Dewey decimal classification (CDD) 085 – Other classifiers
Main entry	100 – Main entry – Personal name 110 – Main entry – Name of organization 111 – Main entry – Name of meeting 130 – Main entry – Uniform title
Title	245 – Titles and responsibilities 246 – Variant forms of title
Edition and printer	250 – Edition 260 – Publication, distribution, and manufacturing
Descrição Física	300 – Physical description
Series	440 – Series indication – Supplementary titles 490 – Series indication

² Nanyoung, “Material Related to KORMARC,” email message, September 2, 2024.

Notes	500 – General note 501 – Note with: 504 – Bibliography note, etc. 505 – Formatted content note 506 – Access restriction note 515 – Numbering peculiarities note 520 – Summary note, etc. 533 – Reproduction note 534 – Original version note 535 – Original/duplicate location note 541 – Immediate source of acquisition note 545 – Bibliographic or historical note 546 – Language note 561 – Historical custody and ownership note 563 – Binding information note 580 – Binding entry complexity note 583 – Action note 590 – Local note
Subject access points	600 – Secondary subject entry – Personal name 610 – Secondary subject entry – Corporate name 611 – Secondary subject entry – Event name 648 – Secondary subject entry – Chronological term 650 – Secondary subject entry – Topic term 651 – Secondary subject entry – Geographic name 653 – Secondary subject entry – Indexing term – Uncontrolled 655 – Secondary subject entry – Indexing term – Gender/form
Secondary entry	700 – Secondary entry – Personal name 710 – Secondary entry – Corporate name 711 – Secondary entry – Event name 740 – Secondary entry – Related and analytical title, uncontrolled 830 – Secondary series entry – Uniform title
Relationships	780 – Previous work 785 – Successor work
Location	856 – Location and electronic access 890 – Display of non-typed characters
Locals	900 – Local marker – Personal name 910 – Local marker – Corporate name 930 – Local title – Unified title 949 – Local tables – General indicators 950 – Local information – Prices 980 – Local information – Collection table

Table 2. Fields used in cataloging rare works in South Korea. Source: own elaboration.

In the South Korean cataloging of rare books, it is possible to observe a greater number of fields that distinguish the cataloging of modern works from that of rare works. Fields related to notes and added entries are particularly prominent, as they include more specific elements such as field 545 (Bibliographic or historical note); field 561 (Historical custody and ownership note); field 583 (Action note); field 648 (Secondary subject entry – Chronological term); and field 655 (Secondary subject entry – Indexing term – Gender/form).

The differences between the fields commonly used in the cataloging of rare books in the two formats mainly arise from local issues associated with cultural differences and are summarized in table 3.

Field type	KORMARC	MARC21
Control	007	003
Numbers and codes	012, 035, 049, 052, 056 and 085	022, 043, 045, 084 and 090
Title	–	240
Series	440	–
Notes	506, 515, 520, 535, 545, 561, 563 and 580	502 and 550
Subject access points	648, 653 and 655	630
Added entry	740	730, 800, 810 and 811
Relationships	780 and 785	–
Location	890	–
Locals	900, 910, 930, 949, 950 and 980	–

Table 3. Differences in the fields used in cataloging rare works in South Korea and Brazil. Source: own elaboration.

It is important to note that KORMARC shares similarities with MARC21. These similarities are explained by the fact that both formats were developed from a common antecedent, LC MARC or MARC II, which evolved into USMARC in 1980. LC MARC had been designed solely for processing a single type of material, the book, whereas USMARC expanded its scope to include other types of materials and media. In the late 1990s, USMARC, together with CAN/MARC, gave rise to MARC21, which is currently used by many countries, including Brazil (Furrie 1999; Assumpção and Santos 2015; Dumer and Albuquerque 2020).

In addition to the fields, subfields, and indicators that differentiate the cataloging of rare books in Brazil and South Korea, there is also a notable difference in the number of fields used in cataloging. In Brazil, it is common to use 54 fields, whereas in South Korea 69 fields are used. This difference results from the presence of specific fields in the Korean context, some of which are discussed below.

The first field to be addressed is field 655 (Secondary subject entry – Indexing term – Gender/form). According to the *Manual for Bibliographic Data Entries in MARC21 Format with Emphasis on Rare and Special Works* (Messina-Ramos 2009), in the cataloging of rare works in Brazil, character 33 (Literary Form), of field 008 (Fixed-length data elements), is used with MARC21 options to describe the literary form and or genre.

In KORMARC, field 008 includes additional options beyond those found in MARC21. Option (w) encompasses three types of Korean poetry that were traditionally sung: hyangga, referring to native songs; sijo, referring to current melodies; and gasa, referring to verse forms (Korean Literature 2023).

The options used in both MARC21 and KORMARC are presented in table 4.

MARC21	KORMARC
0 – Not a work of fiction	b / – Not applicable
1 – Fiction (no further specification)	d – Plays and scripts
d – Drama	e – Essays
e – Essays	f – Novels
f – Novel	h – Satirical literature (excluding comics)
h – Humor, satire, etc.	i – Epistolary literature
i – Letters	j – Short stories
j – Short stories	k – Mystery novels
m – More than one literary form	l – Nonfiction (including reportage and documentary fiction)
p – Poetry	m – Travel writing, diaries, memoirs, and related genres
s – Speeches	p – Poetry
u – Unknown	s – Speeches and works related to oratory
l – Not coded	t – Editorial text
	u – Revision
	v – Collection of works
	w – Hyangga, sijo, gasa, and oral literature
	l – Not coded

Table 4. Options for character 33 of field 008 – Literary Form. Source: own elaboration (Network development and MARC standards office and Library of Congress 1999; National Library of Korea 2014).

However, KORMARC also includes field 655, which is used to represent genre or form as the subject of the work and may be employed to indicate to users the literary form of the item. According to the National Library of Korea (2014), this field is used because terms that indicate genre or form distinguish style or technique in relation to intellectual content, as they represent categories that are distinguishable by perspective, intention, specificity, publication status, and method of expression. The next field to be highlighted is field 561, which exists in MARC21 as field 561 (Historical custody and ownership note), and does not appear in any of the manuals previously mentioned. According to the National Library of Korea (2014), in KORMARC, field 561 is used to describe the ownership and history of the material up to the time it was acquired, as well as information such as when it was placed in its current location, the names of previous owners, and whether the work has been moved from that location.

The final field to be discussed is field 583 (Action note), which is provided in KORMARC by the National Library of Korea (2014) for the description of information related to the processing of materials, such as preservation treatment, current status, pending status, and the completion of preservation actions. MARC21 also includes field 583 as an Action Note; however, it does not appear in any of the manuals used for this study.

The need to describe provenance and rarity marks arises from the characteristics of the individual copy, which are considered among the criteria for a work to be classified as rare (Pinheiro 2009), as well as from its historical value.

In their work, Lima et al. (2023) argue that provenance marks reconstruct the history of rare books and assist in the reconstruction of the memories, interests, and ambitions of their owners, thereby contributing to the construction of individual profiles. According to the authors, these marks often go unnoticed by catalogers and are overlooked even during bibliographic processing. Because they are integral to the history of the book, rarity and provenance marks are of particular importance and should be described in all bibliographic records of rare works.

Conclusions

The main contribution of this work to the advancement of rare book cataloging lies in the dissemination of solutions developed within the KORMARC format, with the aim of addressing the needs of Brazilian information units and improving both the description of rare books and users' access to information. Familiarity with practices adopted by institutions in other contexts can support the development of solutions to challenges in internal processes and services, particularly in information units seeking to update and enhance the bibliographic records of their special collections.

Some of the fields discussed are employed because they reflect the historical context of the country and may serve as inspiration for the development of internal policies by Brazilian institutions, in ways that align with their specific realities and needs. Within the scope of this study, KORMARC demonstrates potential to enhance the cataloging of Brazilian rare books and, consequently, to contribute to the preservation of these works for future research.

It was concluded that the cataloging of rare books is evolving in Brazil and that, in order to sustain this process of improvement, several measures may be adopted. These include needs assessments, evaluation of work processes and practices, and the continuous updating of standards, models, and internal policies for viable solutions, as well as research into national and international examples, all of which contribute to the ongoing development of the field.

The practice of rare book cataloging must take into account the complexity of these materials, encompassing the elements that make them unique and essential for researchers and users from diverse fields. In turn, this comprehensive approach enhances the value attributed to these works, which hold particular significance for the communities to which they belong.

The KORMARC options presented illustrate how a format originally developed within the North American context, MARC, was expanded and refined to enable the representation of relevant characteristics in a different context, namely the Korean one. This development raises several questions, such as which particularities of other countries that use MARC21 and its derivatives may be underrepresented in existing fields, to what extent the standard can be customized to meet local needs without compromising the global interoperability of records, which is one of the defining features of the MARC21 standard, and what should be prioritized between local requirements and international concerns regarding record sharing.

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Museological representation of Flemish and Dutch Baroque metapainting: from Panofsky to CIDOC CRM

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ABSTRACT

This article examines the museological representation of Flemish and Dutch Baroque metapainting through the iconographic-iconological analysis of key works, articulated with the CIDOC CRM. The proposal is an interdisciplinary approach that connects art history, information science and museum documentation, demonstrating how deep meanings emerging in different typologies of metapainting can be formalized in semantic networks. The case studies include examples ranging from the autonomy of painting to the deconstruction of frames, highlighting the potential of the CIDOC CRM for heritage knowledge management.

KEYWORDS

Representation of museum information; Iconographic-iconological method; CIDOC CRM; Metapainting; Baroque.

1. Introduction

Flemish and Dutch metapaintings use resources such as paintings within paintings, mirrors, portraits of artists, or allegories that go beyond simple representation, transforming into discourses focused on the pictorial practice itself (Stoichiță 2015, 158). In the museum setting, they require specific documentation and mediation strategies that can articulate their multiple meanings.

Flemish and Dutch Baroque is particularly interesting for this research. In the Southern Netherlands / Flanders (present-day Belgium), under Spanish rule and with a strong Catholic tradition, religious compositions stand out, marked by intense color and theatricality. In the North, in the United Provinces (present-day Dutch Republic), Protestant and bourgeois society fueled the expansion of genres such as landscapes, still life compositions, and genre scenes. Thus, while the South preserves the tradition of grand devotional painting, the North develops secular and naturalist painting, both reflecting, to varying degrees, on the social role of art (Kitson 1919, 44–6). By examining Flemish and Dutch metapainting from these perspectives, we seek not only to understand their visual codes but also to explore ways of their museological representation.

This article proposes a dialogue between Panofsky's iconographic-iconological method (1939, 14–5) and the ontological CIDOC Conceptual Reference Model (CRM), demonstrating how the different levels of analysis –pre-iconographic, iconographic, and iconological– can be formalized as conceptual frameworks. The method proposed by German critic and historian Erwin Panofsky (Hannover, 1892 - Princeton, 1968) provides an interpretative key for linking visual forms to the semantic structures of each era (Hjørland 2017, 441). The CIDOC CRM, on the other hand, offers a vast semantic network for establishing relationships between elements of representation. The central objective is to examine the museological representation of Flemish and Dutch metapainting through the iconographic-iconological analysis of key works, articulated with the CIDOC CRM.¹ Seeking to bring the interpretative reading of works closer, the proposal assumes an interdisciplinary nature, articulating practices from art history, information science, and museum documentation. By linking the interpretative levels with the CIDOC CRM, the possibility of modeling semantic networks that preserve both the iconological meanings and the material properties of works is opened up (Carboni and Luca 2017, 7–10). In this manner, museums can integrate the critical interpretation of art history with information systems guided by international standards.

The dialogue between theory and practice aims to enrich both art history and museum documentation, bringing museums closer to the contemporary demands of interpretation, management, and communication of visual heritage.

¹ This article is based on the doctoral thesis *Representação da informação museológica de metapinturas barrocas: fundamentos teórico-metodológicos para a integração dos níveis iconográfico e iconológico no CIDOC CRM*. For a more in-depth analysis of the topic, including the research methodology and results obtained, we recommend consulting the full version of the aforementioned thesis. This study was partially funded by the Coordination for the Improvement of Higher Education Personnel - Brasil (CAPES).

2. Theoretical framework

Flemish and Dutch Baroque metapainting emerges at the intersection of late Renaissance pictorial theory and the Baroque search for illusion, spatial expansion, and self-reflexive images. Rather than tracing a long and diffuse prehistory, this article concentrates on the transition from the Renaissance paradigm of ordered representation to Baroque illusionism and metapainting in early modern Europe.

The development of linear perspective during the Renaissance established painting as a coherent visual system capable of representing space according to rational principles. During the seventeenth century, however, Baroque artists increasingly challenged these conventions through illusionistic devices that blurred the boundaries between represented and real space. Trompe-l'œil effects, fictive architecture, mirrors, framed images, and paintings within paintings became central strategies for expanding the visual field and engaging the viewer in complex acts of perception.

In the Southern Netherlands and the Dutch Republic, changing confessional, social, and market conditions encouraged new forms of artistic production and reception. Protestant iconoclasm, the growth of private collecting, the rise of the art market, and the increasing autonomy of painting as an object of aesthetic contemplation contributed to the emergence of works that reflected on their own status as images. Within this context, metapainting developed as a particularly significant artistic strategy through which artists explored the nature of representation, the act of viewing, and the cultural functions of art itself.

This narrower historical focus provides the conceptual background for understanding the visual and symbolic mechanisms analysed in the case studies and establishes the theoretical foundations for their subsequent iconographic-iconological interpretation and semantic representation.

2.1 Metapainting and iconographic-iconological interpretation

Within the visual culture of early modern Europe, metapainting emerged as one of the most distinctive forms of pictorial self-reflection. During the Baroque period, and especially in Flemish and Dutch contexts, painting increasingly turned toward its own conditions of production, circulation, and reception. This self-reflexive tendency is most clearly expressed through the device of the painting within the painting, a strategy that challenges the limits of representation by exploring illusion, framing, and the autonomy of the image (Gállego 1991, 23–47).

In the Southern Netherlands and the Dutch Republic, metapainting developed within changing confessional, social, and market conditions. Protestant iconoclasm, the growth of private collecting, the expansion of cabinet culture, and the increasing visibility of painting as an object of aesthetic contemplation all contributed to the emergence of works that staged the act of seeing, collecting, and representing. In this context, elements such as windows, mirrors, doors, frames, galleries, and self-portraits functioned not merely as compositional devices, but as instruments for questioning the relationship between image and reality, artist and viewer, interior and exterior.

Metapainting therefore cannot be reduced to a formal curiosity. In many Baroque works, the representation of paintings, collections, or reflective surfaces carries symbolic, social, and epistemological meanings that extend beyond the visible motif itself. A gallery picture may refer to practices of collecting and patronage; a mirror may suggest the instability of perception; a framed

image within the image may signal the autonomy of painting or its devotional, allegorical, or political function. These layered meanings make metapaintings especially suitable for iconographic-iconological interpretation.

In this regard, Panofsky's method (1939, 14–15) offers a particularly effective analytical framework. Building upon the iconological tradition consolidated during the Renaissance and early modern period, including the systematization of allegories and symbolic attributes described by Ripa (1593, 2), Panofsky developed an approach that moves beyond the identification of visual motifs toward the interpretation of their cultural significance. His three analytical levels—pre-iconographic description, iconographic analysis, and iconological interpretation—make it possible to progress from the identification of forms and motifs to the reconstruction of conventional meanings and, ultimately, to the interpretation of the cultural values, beliefs, and mental structures embedded in the work. Panofsky's approach is not limited to formal analysis; rather, it seeks to understand how images and motifs reflect the historical worldviews of a given period (Castiñeiras González 2007, 65). For this reason, it is especially useful for studying works in which representation, symbolism, and self-reference are closely intertwined.

From a museological perspective, this interpretative framework also highlights the need for documentary systems capable of recording not only factual information about artworks, but also the contextual and symbolic dimensions that sustain their meaning (Smiraglia 2008, 37). Here, the CIDOC CRM emerges as a strategic tool for cultural heritage documentation. Recognized as an international standard (ISO 21127:2023), it provides a reference ontology for representing contexts, actors, symbols, and implicit relationships within semantic networks (Biagetti 2016, 46). Its structure supports the description of both material attributes and interpretative layers, thus fostering interoperability between institutions and expanding access to digital collections (Bruseker, Carboni, and Guillem 2017, 93).

This is particularly relevant in the case of Baroque metapaintings, where interpretative meaning depends on the articulation of visual evidence, historical context, and scholarly reading. On the one hand, Panofsky's method allows these works to be understood within their cultural and symbolic horizons (Gombrich 1993, 519–27). Representation of museum information involves description of essential attributes of works (authorship, provenance, materials, dimensions), but also progress towards interpretations that reveal deeper meanings. This is an area where many systems still have gaps, prioritizing factual aspects over more complex interpretations (Fortier and Ménard 2017, 485). On the other hand, CIDOC CRM makes it possible to formalize such interpretations in a structured semantic environment, preserving not only the materiality of the artwork but also the layers of meaning attached to it (Doerr, Ore, and Stead 2007, 2). The integration of metapainting, iconographic-iconological analysis, and CIDOC CRM therefore offers a productive framework for the interpretation, documentation, and semantic representation of Flemish and Dutch Baroque visual culture.

3. Methodology

This study adopts a qualitative and exploratory research design, combining iconographic-iconological analysis with semantic modeling. The methodological framework is based on the articula-

tion between Panofsky's interpretative method and the CIDOC Conceptual Reference Model (CIDOC CRM), with the aim of examining how the semantic layers identified in Flemish and Dutch Baroque metapaintings can be represented within a formal heritage documentation environment. Rather than establishing direct equivalences between Panofsky's analytical levels and specific CIDOC CRM classes and properties, the study develops an interpretative mapping that connects art-historical analysis with semantic structures. In this framework, Panofsky's method provides the epistemological basis for identifying visual, thematic, and symbolic meanings, while CIDOC CRM supplies the conceptual mechanisms required to document entities, events, relationships, provenance, and interpretative assertions. Consequently, iconological interpretations are understood as scholarly propositions grounded in historical and documentary evidence, rather than as objective or immutable facts.

The methodological procedure consisted of three stages. First, the selected metapaintings were analysed according to Panofsky's pre-iconographic, iconographic, and iconological levels. Second, the resulting interpretative elements were mapped to CIDOC CRM classes and properties through a comparative analysis of conceptual correspondences. Third, these correspondences were represented as knowledge graphs in order to evaluate their capacity to express visual, contextual, and symbolic relationships within a semantic framework.

Given the scope of the article, the implementation was carried out through knowledge graphs rather than through a complete ontological serialization. Knowledge graphs were considered particularly suitable because they allow the flexible representation of interconnected cultural heritage data while preserving the semantic structure provided by the underlying ontology. In this context, the graphs should be understood as operational instantiations of a CIDOC CRM-based conceptual model. The diagrams were prepared using the classes and properties of CIDOC CRM version 7.1.3 and following the *CIDOC CRM Diagramming Guidelines* updated by Dang and Michon (2024).

4. Types of Flemish and Dutch Baroque metapaintings

In the context of Flemish and Dutch Baroque painting, metapainting emerges as a particularly rich field for exploring how artists reflect on the nature, status, and practices of painting itself. Within this tradition, different strategies of self-reflexivity can be observed, ranging from explicit representations of the painter's studio and artistic labour to more subtle pictorial devices that question illusion, authorship, and the boundaries between image and reality. The following section proposes a typological overview of these forms, highlighting their thematic and visual diversity as well as their shared concern with the conceptual and material conditions of painting in the seventeenth century.

4.1 Autonomy of painting

The independence of the painting as an object in itself stresses the role of the frame in the perception of figurative space and the real environment. The main initial challenge for Baroque painters was learning to treat the ceiling –of places like churches and palaces, commonly divided into vaults,

squares, or other types of architectural decoration— as a spatial unit rather than separate compartments, a process that took time but revealed a tendency toward unification (Kitson 1919, 44–6).

One of the Baroque hallmarks is the notion of *trompe l'œil* (French term, “to deceive the eye”), which consists of an artistic technique capable of creating the illusion of three-dimensionality in two-dimensional surfaces, using perspective, light, and shadow to deceive the viewer’s perception (Diderot 1751-1772, 693). This approach involves using walls as a support for painted scenes, creating the impression that the surfaces either do not exist or expand dramatically.

Another challenge for artists of this era was the extension of space into depth. In the 1660s, space began to extend into infinity, allowing for effects of splendor with figures that evoked a sense of celestial grandeur.

The idea of the *rapporté* picture (French word, “transported” or “repurposed”), placed on the ceiling, designates a decorative or architectural element removed from its original context and inserted into a new structure or composition. Frequently used in historical contexts to preserve fragments of artistic or cultural value, the *rapporté* picture represented a visual form difficult to grasp due to its inclined position, a trend that began in the 17th century (10).

This system was followed by Flemish painter Peter Paul Rubens (1577-1640) with his work *The Banqueting House Ceiling* (1630-1634), located in the Historic Royal Palaces in London, where the integration of multiple scenes and illusionistic architectural effects also seeks a monumental overall effect, allowing each painting to acquire full meaning only within the context of the ceiling as a whole.

4.2 Painting captive of composition

The inclusion of the image painted as a structural element within a larger entity or composition is a recurring feature in Baroque painting. Its use is common in the geometric representation of registers and divisions in murals and retables. Although, at first glance, these elements appear independent, their true meaning is revealed only when considered in relation to the whole.

This type of composition was conceived so that the viewer would appreciate not only the central painting but also the additional details that contribute to the understanding of the scene as a whole, generating an interaction between the figurative elements and the space depicted. A notable example of this approach is *La Parabole de l'enfant prodigue* (1633) by Flemish painter Frans Francken the Younger (1581-1642), housed in the Musée du Louvre in Paris. In this work, Francken inserts a painting within the main scene, centered on the biblical narrative of the prodigal son, enriching the representation with other episodes from the parable, in a visual dialogue that broadens the understanding of the story and the moral virtues portrayed.

A shape positioned in a specific location corresponds to an idea, and the entire composition functions as a visual demonstration, as occurs in *La Passion du Christ* (1630/1635), also by Francken the Younger and part of the Musée du Louvre’s collection. Geometric registers or divisions have been widely used in decorative compositions such as floor mosaics, painted mural ornamentation, book illustrations, and stained glass (Cumming 1996, 50).

In Flemish painting of the early Baroque period, it was common practice to enrich the main composition with additional scenes inserted into the architecture, often related to conceptual series,

such as the sacraments, Works of Mercy, and the commandments. Nonetheless, painters sometimes soften the lines separating the different compartments of a composition to achieve greater naturalness without sacrificing logical order (Martínez 2023, 85).

4.3 Portrait in focus

The portrait serves as the visual and symbolic axis of the work. Framing often acts as a fundamental element, contributing to the illusion that the image belongs to a distinct space. The format of the painting can also convey specific meanings, such as glorification, associated with the circular shape, often used in religious images.

In certain cases, the portrait can symbolize authority or political presence, as in Rubens's *Henri IV Reçoit le portrait de Marie de Médicis et se laisse désarmer par l'Amour* (1600/1625), part of the Musée du Louvre's collection. The composition constitutes an allegory of the victory of love over violence and the political union solidified by marriage.

The presentation of the portrait, however, is not limited to political or glorification functions: it can also take on a sententious character, as in *vanitas* (Latin, "vanity") (833). This is a sub-genre linked to still life, emerging between the mid-15th century and the first decades of the 17th century, in which symbolic elements refer to the fleetingness of life, the uselessness of material goods, and the inevitability of death. In these works, the representation not only alludes to the vanity of existence but also seeks to convey a moral and reflective message, typical of the Baroque, promoting an ethical or religious exercise for the viewer (Casimiro 2015, 92).

In the devotional realm, portraits played an equally important role. Representations such as the *Virgenes de San Lucas* were associated with practices of veneration and spirituality, highlighting the role of portraits as a means of building faith. Several historical examples illustrate this tradition, including: *Cibeles y las Estaciones dentro de un festón de frutas* (1615-1618), by Hendrick van de Balen (1575-1632) and Jan Brueghel the Younger (c. 1601-1678), and *La Virgen y el Niño en un cuadro rodeado de flores y frutas* (1617-1620), by Jan Brueghel the Elder (1568-1625) and Rubens, both part of the Museo del Prado's collection in Madrid.

In these works, the garland of flowers and fruits surrounding the central scene takes on special significance. In one of them, the goddess of earth and agriculture appears crowned by Spring, while allegorical figures of the other seasons offer their fruits, accompanied by lovers bearing zodiacal symbols, referring to the flow of time and the vital cycles of nature. In the other compositions, the device of representing a painted image surrounded by the garland proposes a reflection on the equivalence between real and represented images.

4.4 Painting-window to observe the world

From the 16th century onward, painters faced the challenge of representing space and light in interior settings, popularizing the formula of opening a window in the back wall through which one could see the outside.

The Dutch excelled in this articulation between interior and exterior. Pieter de Hooch (1629-1684) explored the combination of intimate spaces and openings to the outside world in works

such as *A Boy Bringing Bread* (c. 1663), held in The Wallace Collection in London; *The Courtyard of a House in Delft* (c. 1658); *A Woman and her Maid in a Courtyard* (c. 1660/1), and *A Musical Party in a Courtyard* (c. 1677), the last belonging to The National Gallery's collection in London. Emmanuel de Witte (1617-1692) even partially exposed an entire house in *Interior with a Woman at the Virginal* (1665-1670), now in the Museum Boijmans Van Beuningen in Rotterdam. Johannes Vermeer (1632-1675), in turn, captured a small fragment of Delft, his hometown, in *The Little Street* (c. 1658), part of the Rijksmuseum's collection in Amsterdam.

As in Vermeer's famous interiors, his works embody qualities of intimacy and domesticity, revealing the beauty of the everyday world through female figures absorbed in their daily activities. Other notable examples include *The Eavesdropper* (c. 1657), by Nicolaes Maes (1634-1693), and *Perspectiefstuk met een lezende jongeman in een renaissancepaleis* (1662-1667), by Dutch painter Samuel Dirksz van Hoogstraten (1627-1678), currently at the Dordrechts Museum in the Netherlands. The window frame acts as a "picture within the picture," offering a distinct, albeit limited, dimension of the outside world. In certain cases, the process is reversed: it is the interior that can be observed through the windows.

In this context, the genre of *veduta* (Italian word, "view" or "panorama") stands out, defined as a painting or drawing characterized by the detailed and realistic representation of cityscape, monuments, or panoramas, very popular during the Baroque period (Baldinucci 1681, 173). This resource was widely used by Flemish painters, functioning as a suspended painting in the background of the scene, even without being delimited by a rectangular or square frame, since the exterior could be glimpsed through caves or other elements (Gállego 1991, 87).

An emblematic example is the *veduta* depicted in *La Vista y el Olfato* (c. 1620), at the Museo del Prado, created by Hendrick van Balen (1575-1632), Jan Brueghel the Younger, Frans Francken II (1581-1642), Sebastian Vrancx (1573-1647), and others. The work is a replica of two lost paintings, painted in Antwerp by Archdukes Albert and Isabella Clara Eugenia.

In the lower right of the composition, among the various paintings represented inside, a *veduta* stands out: a small painting depicting an open landscape with trees, rocks, and a natural arch. This detail serves as a visual "entrance," creating a vanishing point that leads the viewer's gaze beyond the enclosed space of the gallery depicted.

Unlike the other paintings visible in the scene, the *veduta* presents a glimpse of nature outside, opening the possibility of contemplating the world beyond the architectural confines of the space. Thus, it acts as a painting within the painting that, rather than reinforcing the enclosure of the collection, suggests the permeability between interior and exterior, art, and reality.

4.5 Reflections in the mirror

The mirror becomes an instrument of visual experimentation, emphasizing the relativity of perception and the multiplicity of meanings within the image. In interior painting, artists used it as a resource to create frames within the composition itself. Vermeer, for example, used both mirrors and windowpanes as optical devices in his works, as in *Brieflesendes Mädchen am offenen Fenster* (c. 1657-59), at the Staatlichen Kunstsammlungen in Dresden.

The mirror is also frequently associated with themes of vanity and narcissism, as illustrated in *Girl*

at the Mirror (1632), by Dutch artist Paulus Moreelse (1571-1638), and *Woman at a Mirror* (c. 1652), by Gerard ter Borch II (1617-1681), both part of the Rijksmuseum's collection. Another example of metapainting that uses this technique is the work by Dutch artist Pieter Claesz (c. 1597/98-1661), *Still Life with Violin and Glass Ball / Vanitas-Stilleben mit Selbstbildnis* (1628), at the Germanisches Nationalmuseum in Nuremberg. The mirror made it possible to represent the entirety of the space within the painting, also showing the relativity of perception depending on the angle of viewpoint. However, contemplation through the mirror does not always fulfill these functions, since plurality is inherent to painting, and the reflection can constitute an illusory appearance of the represented reality (Gállego 1991, 95).

Also in *La Vista y el Olfato* the mirror plays a significant role. The scene features an interior filled with paintings at different levels. The allegory is embodied by a woman seated at a table, contemplating herself in the mirror held by Cupid. It not only multiplies the represented space and establishes a typical game of duplication of metapainting, but also refers to the fleeting nature of perception and the illusory nature of the image. In this context, the mirror connects with the allegorical function of the senses –sight and smell– and at the same time dialogs with the universe of the princely collections depicted, reinforcing the tension between the collection materiality and the pictorial illusion.

In turn, Clara Peeters (1588-1621), also known as Clara Lamberts, recognized as one of the pioneers of the *bodegón* –or still life– in the Southern Netherlands, stood out for introducing and popularizing the practice of self-portraits hidden in objects within still life compositions, a technique later adopted by countless artists. Currently, thirty-nine works are known to be signed or reliably attributed to the painter, one of the few women to work professionally in the European artistic field during the first half of the 17th century (Vergara Sharp 2016, 68–71).

Peeters appears reflected –always with slight variations in perspective– in the convex surfaces of glass goblets or metal containers, as in *Stilleben mit Blumen und Goldpokalen* (1612), housed in the Staatliche Kunsthalle in Karlsruhe, and in *Bodegón con flores, coppa de plata dorada, almendras, frutas seco, dulces, panecillos, vino y jarra de peltre* (1611), part of the Museo del Prado's collection. In these works, the abundance of signatures and reflected self-portraits can be understood as an affirmation of her presence and artistic legitimacy in a predominantly male context (Barba Gómez 2020, 66).

4.6 Self-portrait of the painter in action

The self-portrait is one of the observable trends in Baroque figurative painting, acting as a metapictorial device to reflect on the artist's figure, their social status, and the creative process. In many works, the painters portray themselves alongside another subject or even in the act of painting, possibly hinting at the canvas they are working on or simply showing the back of the canvas, hiding the subject. A significant example of this practice is *La visita del Archiduque Leopoldo Guillermo a su gabinete* (1651-1653), by David Teniers II, housed in the Lázaro Galdiano Museum in Madrid. The painting depicts the cabinet of Archduke Leopoldo Guillermo, a central figure in 17th-century European collecting. In such painting, Teniers and the Archduke contemplate the works on display, a gesture that symbolizes the closeness between the collector and his artistic advisor. The scene highlights the breadth of the collection, composed primarily of Flemish works,

but also creations by great masters such as Jan Brueghel the Elder, disciples of Rubens, and contemporary Italian artists. The paintings are carefully arranged, covering almost the entire walls of the room and creating a space dedicated to admiration and study of art.

Teniers's presence in his own work is significant: the painter presents himself not only as an artist, but also as a connoisseur and specialist within the gallery he himself organized. In effect, the work functions as a visual catalog of the paintings of his protector and patron.

Among the themes related to this practice are also portraits of artists by other painters. A notable example is *Apelles Painting Campaspe* (1630), by Flemish artist Willem van Haecht (1593-1637), housed in the Mauritshuis in The Hague (Gállego 1991, 113). It is not a self-portrait of Van Haecht, but rather a historical recreation with a strong allegorical meaning, given that the central scene presents the painter Apelles in the act of creation. In self-portraits in which the painter appears before the easel, their inclusion in the scene not only documents the creative process but also challenges the viewer, engaging them in a visual reflection on the relationship between the artist, the work, and the external gaze. This resource adds an additional layer of meaning and complexity to the painting, converting it into an exercise in metapainting. Ultimately, such works question the status of the image and the artist's place in society (Portús 2016, 251).

4.7 Painting as a cultural artifact

Paintings are valued both as aesthetic objects and as cultural symbols, often found in collectible contexts, such as cabinets of curiosities or chamber of wonders. The aesthetic appeal of a painting lies in its ability to function as a means of artistic representation, as a sign within a language system, and as a cultural object whose value lies in its intrinsic beauty, independent of the message it conveys.

In addition to the aforementioned work by Teniers, housed in the Lázaro Galdiano Museum, other paintings by him exemplify this approach: *El archiduque Leopoldo Guillermo en su galería de pinturas en Bruselas* (1647-1651), housed in the Museo Nacional del Prado, and *Erzherzog Leopold Wilhelm in seiner Gemäldegalerie* (c. 1650), part of the Kunsthistorisches Museum's collection in Vienna. Although these works display stylistic and compositional diversity, they all share the same purpose: to bear witness to Leopoldo Guillermo's commitment to art and his desire to present his collection to his contemporaries, while also celebrating his role as an enlightened patron in the Baroque context. Each version expresses admiration for the refinement of the Flemish painting and also the Archduke's interest in a broader vision of European art.

This type of painting, known as *chamber of wonders*, *wonder rooms*, or *cabinets of curiosities*, emerged during the Renaissance and gained prominence in the 16th and 17th centuries, marking the beginning of metapainting, which peaked in the Baroque period (Cumming 1996, 56–58). These spaces were used by European nobles and bourgeoisie to collect and display luxury objects, reflecting the economic, cultural, and social standing of those commissioning the portraits. Examples of this are shown in Tenier's *Aartshertog Leopold Willem van Oostenrijk in zijn galerij Italiaanse schilderijen* (1651), housed in the Koninklijke Musea voor Schone Kunsten van België, and by Cornelis de Baellieur (1607-1671), in *Intérieur d'une galerie de tableaux et d'objets d'art* (1637), part of the Musée du Louvre's collection.

In 17th-century Dutch painting, domestic interiors often displayed one or more well-framed paintings on the walls, breaking the monotony of the enclosed space and enlivening it, similar to vedutas, as seen in *Musical Company* (1626), by Rembrandt van Rijn (1606-1669), and *Zittende vrouw in het geel met bladmuziek in de hand, naast haar een luit op de tafel* (1667), by Flemish artist Aleijda Wolfsen (1648-1692), at the Rijksmuseum.

This practice was also adopted in England as a way to illustrate the social status of the characters portrayed and the events depicted (Gállego 1991, 142). Some notable examples are the following: *Fiestas del Ommegang en Bruselas: procesión de Nuestra Señora de Sablón* (1616) and *Fiestas del Ommegang en Bruselas: procesión de grêmios* (1616), at the Museo del Prado; *The Ommegang in Brussels on 31 May 1615: The Senior Guilds* (1615), housed in the Victoria and Albert Museum in London, by Flemish painter Denis van Alsloot (1570-1628), and *Les Pantoufles* (1650/1675), by Samuel van Hoogstraten, part of the Musée du Louvre's collection.

In that way, the themes and styles of the most prominent painters of the era were often reproduced in miniature within the paintings themselves. It also became common to depict still life compositions that included paintings, prints, and books, accompanied by fruit, guitars, sheet music, glasses, bottles, and other aesthetic objects on the canvas.

4.8 Hidden key in allegorical painting

The representation of a painting within another painting, when it becomes a central element in a cultural context, gained relevance as artists began to explore conceptualism. This approach is clearly manifested in works such as *La Vista* (1617), housed in the Museo Nacional del Prado, by Flemish painters Jan Brueghel the Elder and Peter Paul Rubens, part of the series *Los Cinco Sentidos*, commissioned by The Netherlands' governors, Isabel Clara Eugenia and Albert of Austria. In this work, the paintings depicted on the walls not only decorate the space but also have symbolic value.

The Flemish Baroque series consists of a set of five allegories, painted on boards using the oil technique, in collaboration with Rubens, responsible for the figures, and Brueghel, responsible for the landscapes and objects. In *La Vista*, the metapaintings that cover the walls of the rooms and galleries take on an educational value, unlike Teniers's *El archiduque Leopoldo Guillermo en su galería de pinturas en Bruselas* (1647-1651) (1647-1651), which merely depicts a collection of cultural objects. In Brueghel, the painting becomes a sign as symbolic as the flowers, fountains, coins, and jewels represented in these allegories.

Similarly, in the Museo del Prado, it is possible to find *El Gusto, el Oído y el Tacto* (c. 1620) by Jan Brueghel the Elder. This work, along with *La Vista y el Olfato*, is closely related to the earlier series created by Brueghel and Rubens in 1618, then in the Alcázar of Madrid. The similarities are evident in the allegories of *La Vista* (1617), *El Oído* (1617-1618), *El Olfato* (1617-1618), *El Gusto* (1618), and *El Tacto* (1618), from the first series. Following the previous model, the five senses are represented by five women in different attitudes, and the setting is an interior filled with objects such as paintings, goldsmithery, musical instruments, sculptures, and tapestries, suggesting rich and varied collections, possibly belonging to the archdukes themselves, whose family emblem is manifested in the double-headed eagle on the lamp. In this case, the senses appear combined

in a single painting, unlike the previous series, which consisted of five panels (Díaz Padrón and Royo-Villanova 1992, 114).

The use of the painting in the background constitutes an indirect reference. Unlike Teniers' galleries, which depict collections of cultural objects, in Brueghel the painting becomes a symbol. Various allegories are used to identify themes such as faith, charity, and abundance, among others, as exemplified in *The Archdukes Albert and Isabella Visiting the Collection of Pierre Roose* (c. 1621-1623), by Hieronymus Francken II (1578-1623) and Jan Brueghel the Elder, part of The Walters Art Museum's collection in Baltimore.

This practice also appears in the interiors of Dutch paintings, such as *Woman Writing a Letter, with her Maid* (c. 1670), at the National Gallery of Ireland; *The Love Letter* (c. 1669-1670), *A Young Woman Standing at a Virginal* (c. 1670-1672) and *A Young Woman Seated at a Virginal* (c. 1670-1672) by Vermeer, and *Woman Playing the Virginal* (c. 1637), by Jan Miense Molenaer (c. 1610-1668), exhibited at the Rijksmuseum in Amsterdam and at The National Gallery in London.

4.9 Deconstruction of frames

The subversion of the frame as a rigid limit of the painting occurs through pictorial strategies that blur the line between the work and the viewer's space. To escape these conventions, artists vary styles, causing the painting to "step outside the frame," as seen in the works of Samuel van Hoogstraten, a student of Rembrandt: *Old Man at the Window* (1653), in the Kunsthistorisches Museum's collection in Vienna; *Augenbetrüger-Stilleben* (1626), in the Staatliche Kunsthalle's and Karlsruhe's collections, and *Young Woman at an Open Half-Door* (1645), attributed to Rembrandt and his studio by the Art Institute of Chicago, indicating that the master supervised the production.

The concept of painted frames is also evident in *Christ on the Cross* (c. 1630-1632) by Flemish painter Anton van Dyck (1599-1641), part of The Courtauld Gallery's collection in London.

On the other hand, the models painted by Rubens for the series of tapestries on the theme of the Eucharist, dated approximately 1625 and commissioned by Archduchess Isabella Clara Eugenia, are examples of metapainting in the form of deconstruction of frames. The works, conceived as triumphal parades and simulating canvases hung in Baroque architecture, provoked a striking ambiguity between reality and artistic image.

The fictional painting that painters draw on their canvas is not intended to be a space, but rather a boundary, a separation. It possesses no spatial entity, but only volume, seeking to ensure continuity between one space and another (Gállego 1991, 186).

The painted frame allows, for example, the sitter to rest their hand on it. By including fragments of facades, such as windows or garlands, the artists break with the conception of the painting as a space limited by four lines. An example can be seen in *Guirnalda con la Virgen y el Niño* (c. 1621), by Balen and Brueghel the Elder.

Other similar examples include *Self-Portrait* and *Boy Looking through the Window*, painted in the late 1640s by Samuel van Hoogstraten, considered a pioneer of illusionism –dubbed the "3D artist" of his time– currently in the State Hermitage Museum's collection in St. Petersburg; Rembrandt's *Girl in a Picture Frame* (1641), in the Royal Castle in Warsaw; *Festoon of Fruit and Flowers* (1660-1670), by Jan Davidsz de Heem (1606-c. 1683), at the Rijksmuseum, and *Guirnalda con paisaje* (1680-1700), by Catharina Ykens II (1659-c. 1737), at the Museo del Prado.

Among the ways in which art transcends traditional boundaries, integrating elements that challenge conventional perception, Dutch works such as *Trompe-l'oeil Ceiling Piece with Birds* (c. 1670), by Abraham Busschop (1670–1729), housed in the Dordrechts Museum in the Netherlands, stand out. Other works that illustrate how physical and symbolic framing can be challenged and reinterpreted include Rembrandt's *Die Heilige Familie mit dem Vorhang* (c. 1646), at the Museumslandschaft Hessen in Kassel, and *The Merry Fiddler* (1623), by Gerard van Honthorst (1592-1656), at the Rijksmuseum.

5. Erwin Panofsky's method

The interpretative model proposed by Erwin Panofsky organizes the analysis of the work of art as a cultural symptom and symbolic structure, bringing together heterogeneous knowledge, necessary to understand a composition inserted in a specific historical moment (Panofsky 1930, 166). This tradition, known as iconology, understands the work not only as a formal object, but also as a point of intersection between form, content, and historical context (Réau 2022, 67–8). Panofsky systematizes this movement by offering a three-level method that has been widely adopted by art historians and that serves as a reference for reading Baroque works and, in this case, the Flemish and Dutch metapaintings studied throughout this work.

Panofsky's classic contribution consists of shifting the investigation from a purely formal perspective to a historically informed interpretation: the work is seen as an entity whose threads connect to the beliefs, ideas, and historical situations of the men who created it (Lafuente Ferrari 2012, XII). Space and time –date and place– only acquire full meaning when articulated: by itself, a date without geographic or institutional context does not explain the position of a work within a tradition or school (XV). Likewise, Panofsky emphasizes that form, content and context constitute a unity that must be approached in an integrated manner, something particularly productive for analyzing paintings that operate on metapictorial levels, pictures that represent paintings, that deconstruct frames, or that function as symbolic keys to allegories.

The Panofskyan method is organized into three clearly differentiated but interdependent analytical levels. Level I –pre-iconographic description (primary or natural theme)– corresponds to the immediate apprehension of forms: identification of figures, objects, and factual relationships perceived sensorially in the work. This involves recognizing the artistic motifs that present themselves to the eye (Panofsky 1939, 14–5). In the viewer's immediate reading, in *The Banqueting House Ceiling*, mythological figures distributed across a painted ceiling, gradations of light, feigned architecture, and a sequence of scenes are identified; in *La Parabole de l'enfant prodigue*, characters, gestures, and central narrative elements are recognized, and in *El archiduque Leopoldo Guillermo en su pinacoteca*, rows of paintings, sculptures, and collectibles are observed. This first visual stage provides the empirical foundation upon which the following levels rest.

Level II – iconographic analysis (secondary or conventional theme)– requires a cultural repertoire: here, recognized motifs are combined and interpreted in light of narratives, literary sources and iconographic traditions that transform motifs into images, stories, and allegories. This is the domain of thematic identification –religious, mythological, historical – and the investigation of the sources that legitimize these interpretations (14–15). Identifying a painting as “vanitas,” “cabinet of curiosi-

ties,” or “sacred scene” implies connecting the pictorial motif to a universe of extra-visual references (texts, collections, collecting practices) that contextualize it. For example, the paintings within *La Vista y el Olfato* are not simply painting-objects, given that they combine motifs (instruments, mirrors, sensory objects) that refer explicitly to the allegory of the Five Senses, through stories and allegories codified by the iconographic tradition. Similarly, in the painting-gallery *La visita del Archiduque Leopoldo Guillermo a su gabinete*, the juxtaposition of certain types of works, as well as the multiplicity of objects in the scene, indicates the motif of the cabinet of curiosities and evokes a narrative of collecting and scholarship, recognizable by its familiarity with literary sources. Finally, in *Guirnalda con la Virgen y el Niño*, the presence of garlands and sacred insignia situates the work within a specific devotional iconographic tradition. Identifying these themes requires consulting sources and iconographic repertoires to transform visual motifs into recognizable stories and allegories.

Level III – iconological interpretation (intrinsic meaning or content) – is the final horizon of the method: it seeks to elucidate the cultural and mental principles that underlie the set of images, that is, the attitudes, values, and worldviews condensed in the work. This level requires a “synthetic intuition” supported by extensive historical and cultural knowledge: it is here that one discovers the symbolic values that Cassirer called “expressions of *weltanschauung*” (German word, “cosmopolitanism” or “worldview”) (Cassirer 1953-1957, 73; 1996, 223). The formal similarity of a motif over time does not guarantee the constancy of its meaning; social and cultural conditions will change, and therefore iconological interpretation must be supported by visual and textual documentation (Panofsky 1939, 14-5). In iconological interpretation, works transcend the visual statement: *The Banqueting House Ceiling* can be interpreted as an affirmation of the autonomy of painting and of a political-ceremonial program that articulates image and power; *La Vista y el Olfato* and *La visita del Archiduque Leopoldo Guillermo a su gabinete* reflect practices of aristocratic patronage, models of erudition, and social uses of collecting, that is, they express a Baroque cosmology where knowledge, power, and prestige are intertwined. In turn, *Guirnalda con la Virgen y el Niño* indicates how decorative and devotional devices (frames, garlands, emblems) function as signs of religious identity and public display of faith. A cabinet of curiosities, or *vanitas*, can also express moral, political (dynastic self-affirmation), or epistemological (valuing encyclopedic knowledge) attitudes. These profound meanings only emerge when formal and iconographic data are intertwined with the documentary, institutional, and social context of the work (Panofsky 1939, 14-5).

This explanatory framework becomes especially relevant when working with metapainting: the “picture within the picture” often functions simultaneously on pre-iconographic (what we see), iconographic (what history or allegory the motif evokes), and iconological (what values, collecting practices, patronage, or ideologies it encapsulates) levels. The strategies of subverting frames and the representations of galleries or cabinets of curiosities analyzed in the previous sections require precisely this triple reading (14-5).

In museum practice, the application of the Panofskyan method faces both challenges and opportunities: on the one hand, it exposes the need for robust iconographic and iconological metadata to describe and retrieve the symbolic content of works; on the other, it highlights the risks of cultural bias when large repositories underrepresent certain traditions (Zhitomirsky-Geffet, Kizhner, and Minster 2023, 323). Research that combines meticulous Panofskyan analysis with digital representation tools, for example, semantic models and ontologies applied to iconographic and iconological descriptions, can reduce gaps and enable richer analyses (Sartini, Erp, and Gangemi 2021, 201-08).

In short, Panofsky's method offers an essential methodological guide for those investigating Baroque metapainting: it provides clear categories (pre-iconography, iconography, iconology) and an integrating principle (form + content + context) that engages directly with contemporary museological problems, from cataloging to semantic representation, and serves as a bridge between traditional humanistic reading and the needs of data modeling for cultural representation, as will be discussed in the proposed integration with CIDOC CRM in the following sections.

6. CIDOC Conceptual Reference Model

The ongoing concern of science with developing tools and systems capable of managing cultural heritage knowledge drives the application of controlled languages and semantic technologies, which are constantly evolving and adapting to diverse contexts. The integration of new approaches and technologies aims to improve the accessibility, preservation, and interpretation of cultural collections. In this context, representation of information reinforces its theoretical foundations through metadata standards, conceptual models, ontologies, and technological tools aimed at describing resources.

The conceptual models produced in the field of information science are based on the premise of facilitating data interoperability on the Web, promoting the integration of content between different institutions (Llanes Padrón and Moro Cabero 2017, 661–62). This decentralized semantic interoperability requires controlled vocabularies and formal structures that ensure that diverse institutions can share and understand heritage descriptions mutually.

In this institutional context, the International Council of Museums (ICOM) was the driving force behind the development of the first conceptual model specifically for describing museum objects: the Conceptual Reference Model (CRM), created in 1996. The pioneering CRM was designed to standardize the description of cultural objects and has evolved continuously ever since. With an initial hierarchy of 86 classes and 137 attributes, it allowed for the description of a wide variety of real-world objects; the most recent official version of the model mentioned above has 99 classes and 198 properties (ICOM 2022b, 1–9).

The International Committee for Documentation's CRM provides definitions and a formal framework for the concepts and relationships used in cultural heritage documentation. It aims to promote a shared understanding of information by offering an extensible semantic framework: a common language for experts and developers and a guide to best practices for conceptual modeling (1–9). Thus, the CIDOC CRM serves as a semantic link between heterogeneous information sources, enabling data integration and exchange (Doerr, Ore, and Stead 2007, 2).

The general scope of the CIDOC CRM can be summarized as “museum knowledge”: its central function is to enable the exchange and integration of heterogeneous sources related to works of art and cultural heritage in a broad sense. The process of consolidation of such model progressed from an initial design centered on relationships between entities to the adoption, starting in the mid-1990s, of object-oriented methodologies that culminated in the first CRM version (CIDOC CRM) in 1998. The standardization process began in 2000, culminating in its acceptance as ISO 21127 in 2006, renewed in 2014 and again in 2023 (ICOM 2022a, 1). By adopting a formal semantics, the CIDOC CRM has emerged as a reference standard for Web initiatives.

The CIDOC CRM is organized around fundamental concepts – classes, properties, relationships, and hierarchies – designed to represent cultural heritage knowledge in a semantic and interoperable manner. Classes (identified by codes such as *E1 Entity*) typify entities, each possessing properties (e.g., *P1 is identified by*) that capture descriptive attributes, while relationships (such as the link between *P4 has time-span* and *E7 Activity*) articulate connections between entities. Its hierarchical structure of super- and sub-classes clarifies conceptual domains, and the explicit treatment of events and activities, temporal and spatial aspects, allows for modeling historicity and location. The CRM offers a flexible and scalable foundation for indexing, exchanging, and integrating large semantic heritage databases in museum, archival, and bibliographic contexts. In this way, it serves as a basis for archiving, exchanging, and integrating data, contributing to the establishment of a global network of information about cultural heritage.

7. Harmonization of the CIDOC CRM with the iconographic-iconological levels

The application of the CIDOC CRM to the representation of visual heritage has been discussed in research focused on iconographic and visual objects (Carboni and Luca 2017, 7–10). These methodologies emphasize the importance of articulating knowledge of art history and iconography with formal modeling structures, which, in turn, promotes interoperability and semantic retrieval. Despite the potential, online access and full adoption of frameworks like the CIDOC CRM remain challenges for many museums (Fortier and Ménard 2017, 485). Studies demonstrate disparities in how institutions organize and present metadata, as well as internal semantic inconsistencies (490). The complexity of the CIDOC CRM and the need for specialized training explain in part the heterogeneous adoption; however, mapping and inventory projects show that it is possible to extract and display useful metadata, expanding the representation of collections. Assessing and improving the quality of iconographic and iconological data remain essential tasks to ensure the effective reuse of these resources.

In the CIDOC CRM, appellations play a central role: they are the names assigned to entities (work titles, toponyms) and constitute relevant historical facts for tracing provenance and uses (Meghini and Doerr 2018, 133). Appellations are instances of the *E41 Appellation* class, which has sub-classes for specific types of names.

Modeling of symbolic meanings also finds its place in the CRM. The class explicitly dedicated to symbols is *E90 Symbolic Object*, essential for representing objects that convey ideas or non-material meanings (emblems, shields, insignia). In addition, other classes can be used to document conceptual content: *E41 Appellation* (names of symbols or titles), *E89 Propositional Object* (intellectual concepts, critical interpretations), and *E28 Conceptual Object* (conceptual products of human thought). Thus, the CRM allows modeling not only the materiality of museum objects, but also the ideas, categories, and interpretations associated with them (133).

The *E55 Type* class is also useful for representing abstract categories or concepts (e.g., religious categories), offering flexibility to accommodate diverse cultural and contextual interpretations.

The relationships involving *E90 Symbolic Object* and related classes (e.g., *P106 is composed of*, *P128 carries*, *P142 used constituent*, *P165 incorporates*, *P190 has symbolic content*) allow us to describe the

material composition, influences, use, and symbolic content of objects, creating a rich framework for analyzing layers of meaning that unite materiality, use, and interpretation.

By exploring the multiple dimensions that painting has assumed over the centuries, it becomes clear that this artistic medium goes far beyond mere visual representation. From its autonomy as an object to its function as a cultural artifact, each typology analyzed highlights the conceptual and symbolic complexity that painting encompasses. Modalities such as the painting captive of composition or the deconstruction of the frame not only enrich the pictorial language but also challenge the viewer's perceptive and narrative conventions. In this sense, the painting not only reflects the societies and cultures of its time, but also acts as a field of visual and intellectual experimentation that continually expands the limits of human creativity.

The proposed harmonization combines Panofsky's method with the CRM to offer a deeper and more structured reading of Baroque metapaintings: starting with theoretical understanding (pre-iconographic description, iconographic analysis, and iconological interpretation) and the semantic structuring of the CIDOC (entities, properties, and relationships), conceptual mapping between Panofskyan levels and the CRM classes/properties is performed, and convergences and divergences are analyzed to adjust the model. Next, an integrated structure (entities, hierarchies, and relevant relationships) is defined and the CIDOC adaptations are implemented to capture the specificities of metapainting, validating the model through case studies that demonstrate the representation of formal, thematic, and symbolic layers. Finally, modeling procedures and examples are documented, an implementation guide is created, and a continuous cycle of evaluation, refinement, and expansion is established to make the methodology replicable, interoperable, and applicable to other contexts and collections.

The analysis of the different typologies of Flemish and Dutch metapainting reveals a complex structure of meanings that goes beyond the merely visual. The formalization of these meanings in the CIDOC CRM not only preserves the semantic richness of the works but also establishes links between distinct pieces, historical contexts, and cultural practices.

In *La Vista y el Olfato*, level I (pre-iconographic description) corresponds to the *E24 Physical Man-Made Thing* and *E36 Visual Item* entities, documented by the *P65 shows visual item* and *P62 depicts* properties, which record the sensory objects and the paintings represented. At level II (iconographic analysis), *E55 Type* and *E90 Symbolic Object*, linked by *P2 has type* and *P129 is about*, are used to identify the allegory of the Senses. At level III (iconological analysis), *E7 Activity* and *E12 Production* come into play, as well as *E89 Propositional Object* and *E28 Conceptual Object*, linked by *P4 has time-span*, *P14 carried out by*, and *P7 took place at*, to highlight collecting practices and implicit epistemological values.

In *El archiduque Leopoldo Guillermo en su pinacoteca*, level I addresses the main work and the works cited as *E24 Physical Man-Made Thing* and *E36 Visual Item*, linked by *P65 shows visual item* and *P62 depicts*. At level II, the *kunstkamer* motif is modeled by *E55 Type* and *E41 Appellation*, through *P2 has type* and *P3 has note*. At level III, commissioning, collection formation, and social meanings are described by *E12 Production*, *E7 Activity*, and *E89 Propositional Object*, interconnected with properties such as *P14 carried out by*, *P53 has former or current location*, and *P4 has time-span*.

In general, the visual inventory of the pre-iconographic level, the thematic identification of the iconographic level, and the iconological interpretation translate into entities linked to temporal,

spatial, and authorial properties. Thus, the interpretative discourse gains a semantic formalization that preserves the richness of meta-paintings. This process also highlighted the need for critical and updated readings, since the meanings of the works are not fixed (Urquizar Herrera and García Melero 2012, 11), but rather transform according to the historical, social, and interpretative contexts in which they are revisited.

The methodology proposed in this study is based on the integration of Erwin Panofsky's iconographic–iconological method with the CIDOC CRM, aiming to provide a more structured and in-depth analysis of artworks, with particular emphasis on Baroque metapaintings. First, the research draws on Panofsky's framework, which combines iconographic analysis, focused on the identification and description of visual elements, with iconological interpretation, addressing deeper symbolic meanings within their historical and cultural context. This approach is complemented by the CIDOC CRM, a conceptual model designed to represent cultural heritage information through interconnected entities and relationships, enabling semantic consistency and interoperability.

The methodology then establishes conceptual correspondences between both systems by mapping iconographic and iconological categories onto CIDOC CRM classes and properties. This alignment is synthesized in Table 1, which presents the correspondence between Panofsky's analytical levels and the CIDOC CRM structures. This process allows for the translation of visual and symbolic layers into a structured semantic framework, while also identifying convergences and divergences between the two approaches.

Panofsky levels	Iconographic-iconological elements	CIDOC CRM classes	CIDOC CRM properties
I. Pre-iconographic description	Form, line, color, space, texture, artistic motifs, style, techniques, and materials	<i>E22 Man-Made Object; E36 Visual Item; E57 Material; E55 Type</i>	<i>P2 has type; P45 consists of; P56 bears feature; P65 shows visual item</i>
II. Iconographic analysis	Genre, attributes, symbols, themes and subjects, historical and cultural context	<i>E28 Conceptual Object; E39 Actor; E90 Symbolic Object; E5 Event; E55 Type</i>	<i>P67 refers to; P62 depicts; P12 occurred in the presence of; P2 has type</i>
III. Iconological interpretation	Intrinsic meaning, symbolic values, mentality of the period, artistic trends and movements	<i>E89 Propositional Object; E55 Type; E7 Activity</i>	<i>P67 refers to; P2 has type; P4 has time-span; P9 consists of</i>

Table 1. Mapping of Panofsky's Levels with some classes and properties of CIDOC CRM.

Based on this mapping, an integrated model is developed, defining key entities, relationships, and hierarchies tailored to the analysis of Baroque metapaintings. Validation is carried out through the application of the model to selected case studies, enabling the assessment of its capacity to represent complex museological information and subtle layers of meaning.

The following simplified graph illustrates how a single case study can be represented at the iconographic level and, in a reduced form, at the iconological level within a CIDOC CRM-aligned knowledge model. The example is intentionally concise, as the aim of this section is to make explicit the logic of semantic modeling rather than to provide a full technical encoding of the artwork.

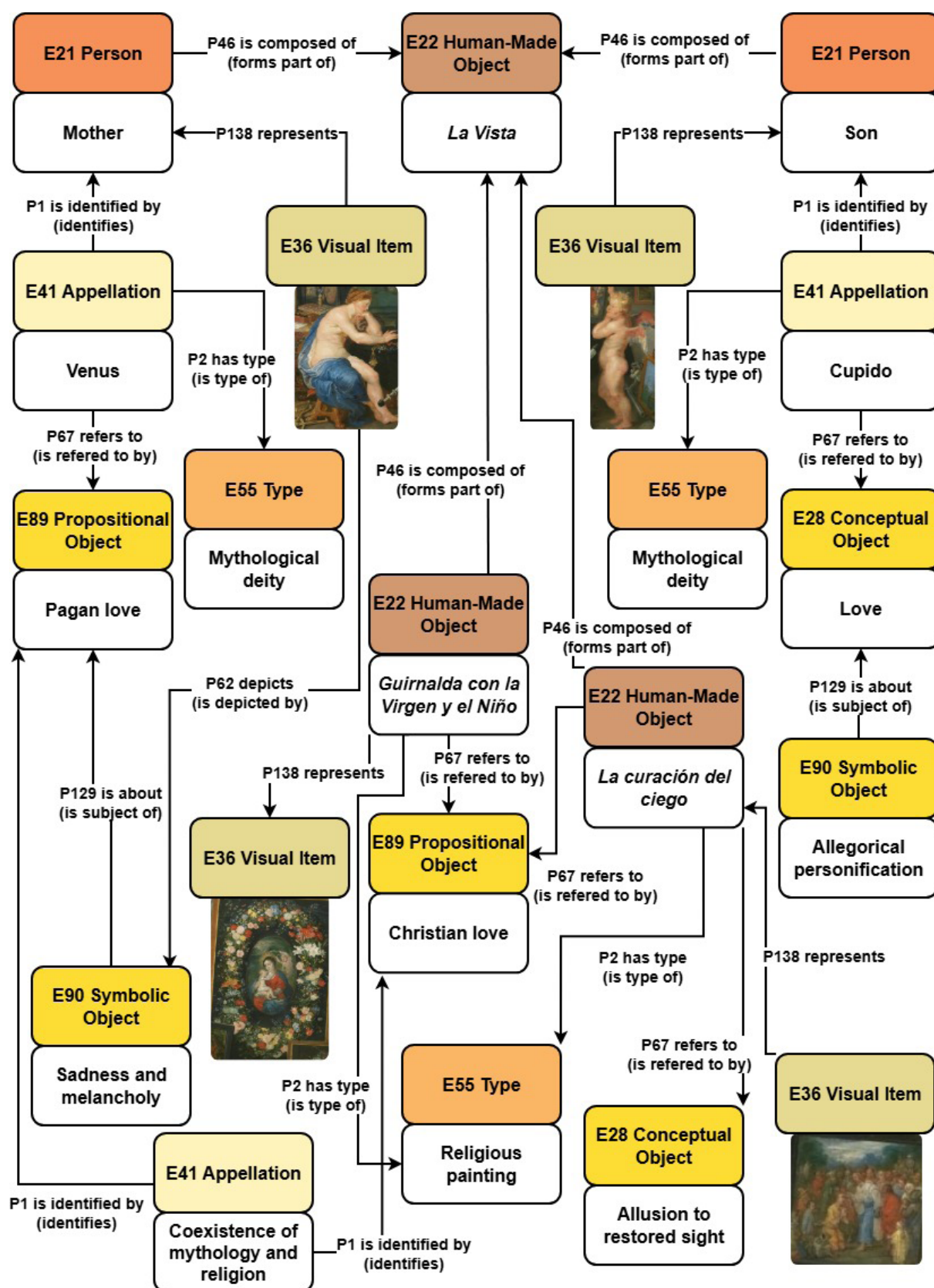


Figure 1. Illustrative knowledge graph representation for *La Vista*.

Level II – iconographic reading: The Allegory of Sight (*La Vista*) can be modelled as an *E24 Physical Man-Made Thing* that embodies a complex visual configuration expressed through an *E36 Visual Item*. At this level, the scene is structured as a multi-layered allegory of vision in which Venus, traditionally associated with beauty and love, is reinterpreted as a personification of Sight. In this specific composition, following Rubens' adaptation, the conventional mirror is replaced by the painting *La curación del ciego*, thereby shifting the epistemic emphasis from self-reflection to revelation through divine healing.

Within the same visual field, Cupid functions as an additional allegorical agent of desire, reinforcing the affective dimension of perception. The coexistence of Venus and Cupid in a domestic interior populated by paintings, such as *La curación del ciego* and *Guirnalda con la Virgen y el Niño*, can be modelled as interrelated *E90 Symbolic Object* elements, each carrying layered symbolic meanings that combine pagan and Christian iconographies. The presence of the magnifying glass near one of the paintings further supports an interpretation of close observation and epistemic attention, reinforcing the sensory and cognitive dimensions of sight as both physical and intellectual perception.

Level III – iconological reading: At the iconological level, the interpretation can be modelled as an *E89 Propositional Object* that articulates the broader cultural meaning of the composition. The scene is understood as a Baroque synthesis of sensory allegory, devotional imagery, and intellectual reflection, in which sight becomes a privileged site for negotiating between empirical perception and spiritual insight. The tension between Venus Celestial and Venus Vulgaris, as well as the juxtaposition of mythological figures with Christian narratives, can be interpreted as a visual expression of Neoplatonic thought and Counter-Reformation visual culture. In this reading, the work operates not only as a representation of vision, but as a conceptual statement on the hierarchy of loves, the epistemology of seeing, and the moral framing of perception within seventeenth-century pictorial culture.

The model is implemented by aligning Panofsky's analytical categories with CIDOC CRM structures and introducing necessary adaptations to capture symbolic nuances. The overall methodological workflow is summarized in Figure 2.

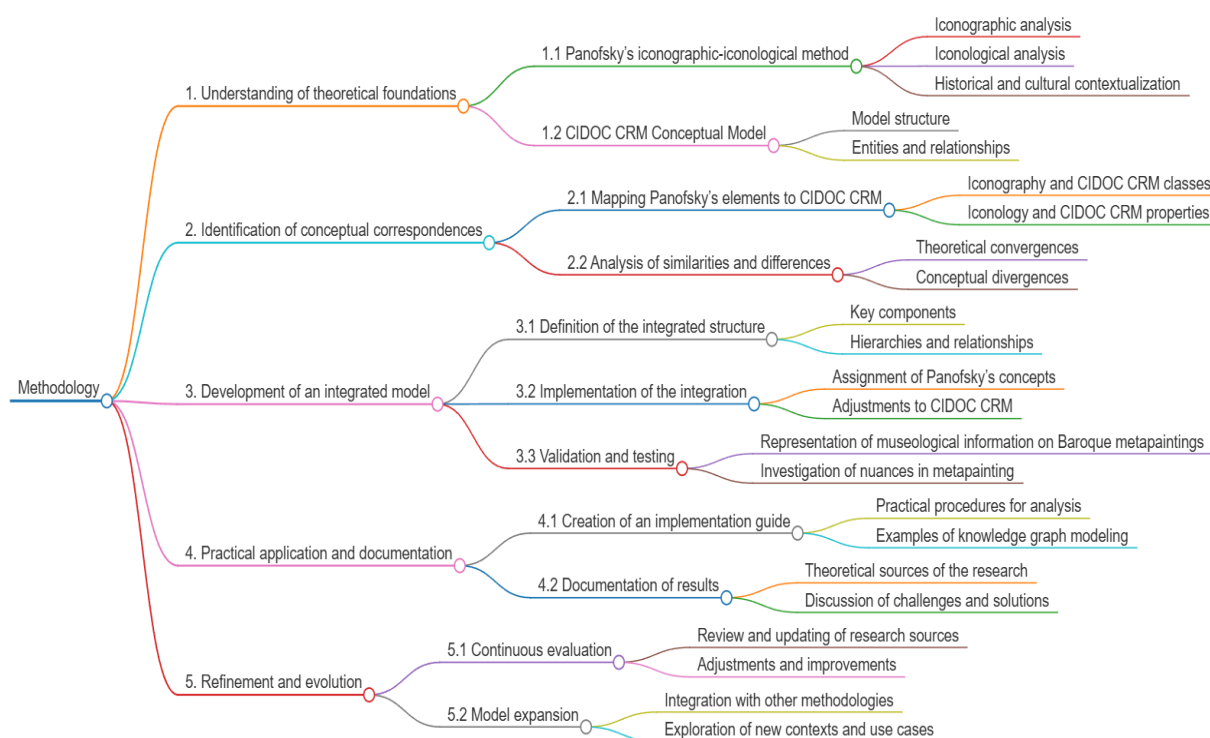


Figure 2. Methodological framework for integrating Erwin Panofsky's iconographic-iconological method with CIDOC CRM.

Overall, this integrative approach provides a robust framework for the analysis and semantic representation of Baroque metapaintings, combining art-historical interpretation with knowledge modeling. It also supports ongoing refinement and expansion, allowing the model to adapt to new research contexts and methodological developments.

To further strengthen the methodological structure, particular attention is given to the role of controlled vocabularies and authority files in ensuring terminological consistency across both iconographic interpretation and semantic modeling. The use of standardized references not only enhances data interoperability but also supports alignment with broader Linked Open Data ecosystems in the cultural heritage domain. Furthermore, the model is conceived as adaptable, enabling its application to other artistic periods and typologies beyond Baroque metapainting. This ensures that the proposed approach is not limited to a specific corpus but can evolve as a flexible tool for interdisciplinary research, bridging art history, museology and information science.

Conclusion

The analysis undertaken in this article demonstrates that the integration between Panofsky's iconographic-iconological method and the CIDOC CRM can be considered a productive but methodologically complex approach for the museological representation of Flemish and Dutch Baroque metapainting. While this articulation enables a structured description of the visual, thematic, and contextual layers of the works, its application also reveals important tensions between interpretive art history and formal ontological modeling.

In particular, the translation of Panofsky's iconological level into CIDOC CRM constructs requires careful methodological qualification. Iconological interpretation operates within a domain of scholarly inference, cultural contingency, and historical change, whereas formal ontology necessarily stabilizes meaning into discrete, identifiable units. This tension implies that any mapping of iconology into a knowledge graph should not be understood as a direct formalization of cultural "truth," but rather as a representation of documented interpretive statements, each situated within a specific scholarly context.

The integration nevertheless highlights the value of knowledge graphs as tools for making interpretive structures explicit, traceable, and interoperable across systems. However, rather than resolving ambiguity, these systems inevitably preserve it in a structured form. They render visible the plurality of possible readings while requiring that each interpretation be anchored in provenance, scholarly attribution, and curatorial responsibility. In this sense, expert curation and controlled vocabularies remain essential components for any practical implementation in museum information systems.

In practical terms, the harmonization developed paves the way for replicable methodologies capable of strengthening art history, information science, and museology. Ultimately, while the proposed framework offers a promising pathway for connecting art-historical interpretation, museum documentation, and semantic technologies, its applicability must be framed within clear methodological limits. The model should not be understood as a definitive or exhaustive representation of iconological meaning, but as a dynamic and revisable structure that supports comparative analysis and interdisciplinary dialogue. Its strength lies less in producing fixed interpretations than in enabling their explicit documentation, comparison, and critical reassessment within digital heritage environments. More than a conclusion, this research points to a horizon of continuity, where the study of metapaintings can continue to expand the scope of museum research and digital humanities, in constant dialogue with the contemporary challenges of preserving and interpreting cultural heritage.

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Development of a semi-automated framework for analytical metadata for comics

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ABSTRACT

The study addresses the inadequacy of traditional cataloguing standards applied to comics, a historically marginalised medium, proposing a practical solution consistent with the ongoing debate. The framework developed here, based on the principles of Augmented Humanities, integrates GPT-4o for the automatic extraction of metadata from a sample of 100 digital comics. The results show high accuracy in extraction, filling in numerous fields of an analytical bibliographic record proposed and validated for the experiment. The main objective is to demonstrate the potential of AI in improving the efficiency of cataloguing practices. However, the study highlights persistent problems such as hallucinations, difficulties in handling incomplete historical data on the material, and the need for human supervision for ambiguous fields. Finally, the work outlines a roadmap for integrating AI into descriptive processes, promoting the bibliographic recognition of comics as a cultural resource.

KEYWORDS

Generative artificial intelligence; Bibliographic description of comics; Automated metadata generation; Library and information science.

Sviluppo di un framework semi-automatizzato per la metadattazione analitica di fumetti

ABSTRACT

Lo studio affronta l'inadeguatezza degli standard catalografici tradizionali applicati al fumetto, questo medium storicamente marginalizzato, proponendo una soluzione pratica coerente con il dibattito in corso. Il framework qui sviluppato, fondato sui principi delle Augmented Humanities, integra GPT-4o per l'estrazione automatica di metadati da un campione di 100 fumetti digitali. I risultati mostrano un'elevata accuratezza nell'estrazione, compilando numerosi campi di una scheda bibliografica analitica proposta e validata per l'esperimento. L'obiettivo principale è dimostrare il potenziale dell'IA nel migliorare l'efficienza delle pratiche catalografiche. Tuttavia, lo studio evidenzia problemi persistenti come le allucinazioni, le difficoltà nella gestione di dati storici incompleti sul materiale e la necessità di supervisione umana per campi ambigui. Infine, il lavoro delinea una roadmap per l'integrazione dell'IA nei processi descrittivi, promuovendo il riconoscimento bibliografico dei fumetti come risorsa culturale.

PAROLE CHIAVE

Intelligenza artificiale generativa; Descrizione bibliografica del fumetto; Generazione automatica di metadati; Biblioteconomia e scienze dell'informazione.

1. Introduzione

L'integrazione dell'intelligenza artificiale (IA) nelle pratiche di descrizione automatica di oggetti culturali suscita grande interesse nel dibattito contemporaneo all'interno delle Library and Information Science (LIS) (De Martin, Leporini, e Pellegrino 2021, 480-83). Tale interesse si manifesta con duplice valenza: da un lato emergono preoccupazioni legate alla perdita di controllo umano, all'opacità degli algoritmi e al rischio di riduzione della qualità descrittiva; dall'altro si riconoscono le potenzialità trasformative offerte dal deep learning, se correttamente compreso e integrato nei processi lavorativi del mondo librario e documentale (Guerrini 2025, 23-6).

Queste dinamiche si amplificano in presenza di materiali ad alta componente visuale e narrativa, che spingono gli strumenti innovativi ai limiti delle loro capacità operative. I fumetti costituiscono un caso di studio esemplare; nonostante una crescente rivalutazione culturale e commerciale negli ultimi decenni (Amato 2024, 25-62), sostenuta anche da autorevoli studiosi come Umberto Eco, rimangono storicamente esclusi dai contesti accademici e istituzionali. Ciononostante, si tratta di un medium caratterizzato da una forte ibridazione e stratificazione espressiva.

Tuttavia, la metadattazione del fumetto continua a soffrire di una strutturale inadeguatezza: le informazioni bibliografiche disponibili risultano spesso frammentarie, generiche e non standardizzate, limitandosi a eccezioni isolate (Formiga 2024, 25-45) più che a criteri sistemici (Sferruzza 2023, 297-311). Le conseguenze: il fumetto sfugge ai modelli descrittivi tradizionali, generando un vuoto normativo che non è soltanto tecnico, ma anche epistemologico. Questa carenza è insieme causa ed effetto della marginalizzazione del medium nei contesti bibliografici.

In parallelo, la ricerca internazionale sta esplorando con rinnovato slancio il ruolo dell'IA nella generazione e gestione dei metadati (Soykan, Yuret, e Sezgin 2024, 257-81), anche nel settore dei Comics Studies, con risultati promettenti in termini di analisi visuale, comprensione e produzione (Vivoli et al. 2024, 3-8), anche di schede descrittive (Gamage e Wanigasooriya 2024, 257-84). Le applicazioni più interessanti emergono proprio in quei contesti in cui l'intervento umano è limitato o inefficiente, dimostrando come l'IA possa contribuire a individuare elementi altrimenti trascurati da operatori non specialisti, migliorando così l'accessibilità e la valorizzazione dell'opera.

Il presente contributo persegue due obiettivi principali. Il primo consiste nello sviluppo e nella sperimentazione di un framework operativo per la metadattazione semi-automatizzata di materiali bibliografici visivi, tramite un sistema progettato specificatamente per integrare un Large Visual Language Model (LVLM) (Zhu et al. 2024, 1-3), in particolare il modello GPT-4o. Il corpus di riferimento è costituito da 100 fumetti digitalizzati selezionati dal *repository* Digital Comic Museum.¹ I metadati generati, in formato strutturato (JSON) e non strutturato (TXT), vengono valutati in termini di conformità, coerenza e interoperabilità rispetto alla normativa catalografica vigente.

Il secondo obiettivo nasce dalla constatazione che non esista, ad oggi, almeno in Italia, una normativa specifica per la metadattazione dei fumetti che sia condivisa e accettata uniformemente; questi sono generalmente descritti tramite adattamenti della normativa generale.² In risposta a questa

¹ Digital Comic Museum, Homepage, «We are the best site for downloading free public domain Golden Age Comics», <https://digitalcomicmuseum.com>.

² Con gli standard condivisi, si fa riferimento alle REICAT, a RDA e ad altre linee guida, che però rappresentano un "vestito stretto" per il fumetto, che il catalogatore deve necessariamente adattare forzatamente all'oggetto, parafrasando Sferruzza nel suo articolo del 2023.

lacuna, si propone un modello sperimentale di scheda descrittiva bibliografica analitica, orientato alla valorizzazione del fumetto in quanto oggetto culturale complesso.

Il metodo adottato si ispira ai principi delle Augmented Humanities (Bryant 2021), che concepiscono l'IA come strumento a supporto dell'attività umana, e non come sua sostituzione. L'ambizione si limita alla volontà di contribuire al dibattito scientifico e professionale con una proposta che non introduce nuovi standard normativi, ma un framework adattabile alle diverse esigenze istituzionali e progettuali. In quest'ottica, la metadattazione non è solo un atto tecnico, bensì una forma di mediazione cosciente, critica e culturale, capace di rispecchiare la polifunzionalità del materiale descritto (Guerrini 2020, 13, 86).

2. La normativa attuale: limiti e inadeguatezze

Descrivere i fumetti all'interno di una collezione implica il confronto con un quadro normativo complesso e stratificato, caratterizzato da un'assenza complessiva di protocolli condivisi specifici relativi alla struttura narrativa unitaria, alla completezza dell'arco narrativo e alla distinzione tra volumi autoconclusivi e opere serializzate rispetto alla generica categoria delle monografie (REICAT 1.5.2.C). In Italia, il riferimento principale è costituito dalle REICAT (Regole italiane di catalogazione), mentre per la codifica dei metadati si utilizza il formato UNIMARC, previsto dal Servizio Bibliotecario Nazionale (SBN). A livello internazionale, gli standard di riferimento sono ISBD (*International Standard Bibliographic Description*) e RDA (*Resource Description and Access*), implementati attraverso i formati UNIMARC o MARC21, a seconda del contesto istituzionale.

Sono tuttavia evidenti diversi problemi. Nessuno di questi standard offre una trattazione sistematica del fumetto, che viene solitamente assimilato alle risorse illustrate o a contenuto misto. Le REICAT forniscono indicazioni limitate e frammentarie: la regola 4.5.2.4(B) permette di sostituire "ill." con "fumetti" nella descrizione fisica, mentre la 8.1.2 riconosce l'inscindibilità tra testo e immagine, aspetto certamente importante per il fumetto, ma non sviluppato operativamente. RDA, d'altro canto, presenta riferimenti altrettanto frammentari, collocando i fumetti genericamente tra le risorse a contenuto eterogeneo.

Tra i problemi principali vi è la distinzione tra monografia e pubblicazione seriale: mentre alcuni periodici come *Topolino* sono correttamente trattati come seriali, le graphic novel necessiterebbero di criteri più specifici rispetto alla generica categoria delle monografie (REICAT 1.5.2.C). Anche la gestione di titolo e menzione di responsabilità presenta ulteriori complessità, particolarmente evidenti nei manga, spesso caratterizzati da un doppio frontespizio. Occorre quindi privilegiare quello coerente con il verso di lettura originale dell'opera (da destra a sinistra nei manga giapponesi), generando però contrasti con la prassi operativa standard.

È inoltre essenziale documentare tutte le figure autoriali coinvolte nella realizzazione dell'opera. Questo aspetto genera ancora oggi discussioni tra esperti e professionisti, che faticano a trovare una sintesi condivisa. Un ulteriore tema è rappresentato dalle numerose varianti editoriali e ristampe: richiedono manifestazioni distinte o è sufficiente creare collegamenti tra edizioni, prestando attenzione a titoli varianti e pseudonimi?

A fronte di queste problematiche, alcuni contesti nazionali hanno sviluppato soluzioni specifiche. Tra le esperienze più rilevanti si segnala quella francese, dove le RDA-FR includono disposizioni

esplicite per i fumetti, affrontando sistematicamente sia la forma dell'espressione (6.15.1.3) sia le menzioni di responsabilità condivise (6.27.1.3). Questo approccio consente maggiore coerenza e specificità rispetto al panorama italiano.

Negli Stati Uniti, grazie al lavoro del Graphic Novels and Comics Round Table (GNCRT) dell'ALA, dal 2022 è disponibile una linea guida intitolata *Best Practices for Cataloging Comics and Graphic Novels Using RDA and MARC21* (Bailund et al. 2023, 62-8). Essa fornisce istruzioni operative più chiare, distinguendo nettamente tra comic books seriali e graphic novels. Sebbene pensata per MARC21, questa guida può essere adattata anche a contesti UNIMARC.

Rilevante è anche il Metadata Framework for Manga sviluppato dall'Università di Tsukuba in Giappone, che propone un modello ibrido basato su FRBR, Wikidata e MPEG-7. Questo approccio si distingue per l'attenzione ai metadati e all'accessibilità, includendo buone pratiche del contesto Wikidata (Sugie et al. 2025, 69-97).

Come sottolinea Gupta in un suo articolo del 2025, sarebbe auspicabile l'adozione di uno standard condiviso, ma finora si è proceduto con iniziative isolate (Gupta 2025, 1-4). Questi esempi internazionali dimostrano che la rigidità degli standard tradizionali potrebbe essere superata attraverso adattamenti specifici, che devono però essere accompagnati da strategie mirate sin dalle fasi preliminari di un progetto di catalogazione.

È in questo scenario di inadeguatezza normativa e frammentazione internazionale che emerge con forza la necessità di esplorare soluzioni innovative, tra cui l'impiego dell'IA per l'automazione dei processi descrittivi. L'adozione dell'IA non costituisce solo una scelta tecnologica, ma rappresenta una risposta strategica a criticità strutturali. Le ragioni sono molteplici: in primo luogo, la natura ibrida del fumetto richiede capacità analitiche che superino i limiti delle categorie tradizionali; in secondo luogo, la crescita esponenziale della produzione fumettistica rende insostenibile un approccio esclusivamente manuale alla catalogazione. L'automazione, se sfruttata in modo intelligente, può garantire scalabilità ed elevata coerenza descrittiva.

3. L'IA come risposta alle problematiche catalografiche

L'impiego dell'IA generativa nella metadattazione dei fumetti può rappresentare una risposta concreta ai limiti degli standard tradizionali, offrendo la possibilità di automatizzare processi complessi e garantire maggiore coerenza metodologica nella descrizione. Fin dagli anni '90, la ricerca informatica si è interessata all'elaborazione automatica delle tavole a fumetti, concentrandosi inizialmente sulla segmentazione grafica (Rigaud 2014, 14-6), sul riconoscimento del testo nei balloon (Dutta, Biswas, e Das 2021, 49-62) e sull'analisi semantica sequenziale dei contenuti nei pannelli (Zhang e Hotta 2023, 76-90).

La comprensione automatica dei fumetti costituisce un ambito di ricerca complesso, poiché richiede l'integrazione di contenuti visivi e testuali all'interno di una struttura narrativa multimodale. I modelli basati su computer vision, machine learning e deep learning devono affrontare una scomposizione analitica degli elementi del fumetto come vignette, balloon, personaggi, testi, onomatopее, per consentire analisi precise e interoperabili, finalizzate a un'affidabile comprensione dell'opera (Vivoli et al. 2024, 9-22).

Le principali sfide tecniche derivano dalla natura complessa del medium fumettistico. La segmen-

tazione delle immagini risulta problematica a causa della varietà dei layout, che rende difficile isolare automaticamente le vignette. Ad esempio, un OCR (*Optical Character Recognition*) deve confrontarsi con font irregolari e balloon atipici, che ostacolano l'estrazione accurata del testo (Ponsard, Ramdoyal, e Dziamski 2012, 471-78). Mentre l'associazione tra testo e immagine richiede algoritmi sofisticati per riconoscere chi parli e collegare balloon e personaggi. Contemporaneamente, l'analisi del contenuto narrato necessita di un'elaborazione temporale e logica altrettanto complessa, data la frequente non linearità delle trame.

Nel dominio biblioteconomico, le esperienze condotte dalla Library of Congress hanno portato a test per la generazione automatica di metadati tramite IA (Lincoln et al. 2020, 28-31), mettendo in luce sia le potenzialità della tecnologia sia la necessità di una supervisione umana per garantire conformità semantica e normativa.

Anche il panorama italiano presenta esperienze che, seppur non direttamente focalizzate sui temi di questa ricerca, dimostrano la maturità tecnologica necessaria: un esperimento condotto dal Polo Archivistico dell'Emilia-Romagna (ParER)³ ha recentemente testato l'impiego di modelli di IA per il confronto normativo e il calcolo automatico dell'indice di interoperabilità dei formati. Si tratta di un precedente di rilievo, poiché documenta come l'IA potrebbe essere impiegata nel riconoscere formati di file e confrontarli secondo regole complesse per deliberare delle sintesi normative.

4. Linguaggi, formati, standard per una metadattazione semi-automatizzata

Per delineare un quadro generale dell'infrastruttura descrittiva e semantica entro cui si colloca il presente lavoro, è utile distinguere tre livelli: il primo occupato dai set di elementi e standard di codifica di ausilio nel dominio bibliografico-digitale; il secondo, dai linguaggi del Web semantico e i Linked Open Data; infine, i formati di serializzazione e scambio dati impiegati a livello applicativo.

Sul primo piano, il Dublin Core, set di elementi descrittivi sviluppato per la metadattazione e interoperabilità tra risorse digitali e Web applicato sin da subito in ambito bibliografico-digitale, offre una struttura semplice ma efficace (Jackson et al. 2008, 5-21); MARCXML e UNIMARCXML, rappresentazioni XML dei record MARC21 e UNIMARC, consentono la conversione e lo scambio dei record bibliografici fra sistemi informativi diversi.

Sul piano dei linguaggi semantici, il Resource Description Framework (RDF), modello generale del Web semantico, permette di rappresentare i metadati come triple soggetto-predicato-oggetto, creando una rete di conoscenze collegabili nei Linked Open Data.

Su un piano più alto, quello degli standard di contenuto e dei modelli concettuali della catalogazione, il progetto BIBFRAME, iniziativa Linked Open Data della Library of Congress, supera il formato MARC con un modello articolato in tre entità principali (*Work*, *Instance* e *Item*); lo standard di contenuto RDA, basato sul modello concettuale IFLA-LRM, mantiene l'indipendenza dal formato di codifica e garantisce coerenza semantica fra standard differenti.

³ L'esperienza è stata presentata al convegno Conference on Information and Research Science Connecting to Digital and Library Science (IRCDL 2026) e sarà pubblicata sia nel numero speciale 2026 della rivista Umanistica Digitale, sia negli atti della conferenza. <https://ircdl2026.unimore.it/>.

È fondamentale chiarire il fine e l'obiettivo di una descrizione per determinare quali standard, formati di codifica e linguaggi adottare. Non si tratta soltanto di prassi legate a specifici contesti geografici, ma anche di scelte strategiche definite a monte, in funzione di obiettivi progettuali. A questi piani si aggiunge inoltre quello, più strettamente operativo, dei formati di serializzazione e scambio dati fra applicativi, dal quale il framework qui presentato attinge per ragioni legate alla pipeline di elaborazione.

Nell'esperimento presentato nei paragrafi seguenti, si è scelto di adottare, accanto al testo normale, il formato JSON, formato di serializzazione di scambio dati fra applicativi, come principale output. Questa scelta è motivata dalle caratteristiche intrinseche dei modelli di linguaggio: gli LVLN e gli LLM sono ottimizzati e affidabili quando si tratta di generare o convertire in JSON, in quanto linguaggio strutturato standard per l'interazione tra programmi. Il formato JSON presenta il vantaggio di essere facilmente leggibile anche per gli operatori umani, inoltre è facilmente convertibile in altri metalinguaggi e non richiede strutture complesse predefinite. Ad oggi rappresenta uno standard per l'interazione semplice tra sistemi e applicazioni.

5. Fondamenti metodologici: Augmented Humanities e principi etici

La componente sperimentale del framework risiede nell'automazione della metadattazione attraverso l'impiego di IA, applicata in modo analitico e specificamente orientato ai fumetti digitalizzati. L'esperimento si è focalizzato sulla qualità, sulla struttura e sulla standardizzazione dei metadati generati, con l'obiettivo di ottenere descrizioni coerenti e potenzialmente integrabili nei sistemi informativi bibliografici (Maggi et al. 2023, 373-79).

L'intera metodologia si ispira ai principi delle Augmented Humanities, secondo cui l'IA non sostituisce l'intervento umano, ma ne potenzia le capacità operative (Nguyen e Elbanna 2025, 6-9). Questa visione collaborativa ha consentito di perseguire obiettivi fondamentali, tra cui l'affidabilità e la qualità dei risultati sperimentali. Nel framework sviluppato, ad esempio, l'IA viene impiegata per l'estrazione automatica dei metadati visivi e testuali, mentre la validazione finale e la risoluzione di ambiguità rimangono prerogative dell'operatore umano specializzato.

Tale impianto metodologico mira a garantire qualità dei metadati e rispetto etico nel lavoro catalografico (Floridi et al. 2018, 689-707), seguendo i principi di trasparenza, equità, non maleficenza, responsabilità e privacy delle linee guida globali sull'IA (Jobin, Ienca, e Vayena 2019, 389-99). Seguendo questo tracciato, il framework è stato concepito per essere replicabile, scalabile e applicabile anche ad altri oggetti bibliografico-documentali, soprattutto nei casi in cui la componente visiva sia preponderante e non esistano linee guida consolidate o uniformemente condivise.

6. Selezione del corpus e preparazione dei dati

Il progetto ha avuto inizio a partire da un corpus di 100 fumetti digitali (circa 50.000 immagini JPEG) selezionati dal Digital Comic Museum, un *repository* online di fumetti della Golden Age⁴

⁴ Golden Age comics fa riferimento ad uno "standard" o attributo che viene conferito a quei fumetti che condividono le caratteristiche di quelle opere prodotte fra il 1938 e il 1956 circa.

di pubblico dominio. I metadati inseriti manualmente nel *repository* da un utente sono stati utilizzati come *ground truth* (riferimento di confronto considerato veritiero per la valutazione delle risposte del modello) per la validazione degli output generati dall'IA, al fine di ridurre bias soggettivi nella valutazione.

Dunque, tutti i fumetti sono stati selezionati facendo riferimento al lavoro di un unico utente, le cui schede presentavano campi descrittivi completi, coerenti e conformi allo schema bibliografico analitico adottato nel prompt. Il corpus è stato inizialmente riorganizzato in un database Excel per facilitare l'analisi comparativa finale dei metadati estratti dall'IA. L'uniformità dei metadati ha garantito la coerenza nei criteri descrittivi, facilitando la valutazione dell'esperimento.

La selezione ha privilegiato i fumetti degli anni '40-'60 sia per la loro disponibilità in pubblico dominio, sia per assicurare la riproducibilità dell'esperimento, includendo al contempo un'ampia varietà di generi, stili e autori. Al momento, questa scelta è stata condizionata dall'assenza di altri casi studio o di istituzioni disponibili a fornire materiale simile e più recente, senza vincoli legali. Va segnalato che nei record preesistenti mancavano codici identificativi (come ISBN o EAN); tali campi sono stati quindi esclusi, insieme ad alcune informazioni presenti nella scheda e richieste dal prompt. Poiché i fumetti analizzati appartengono a periodi in cui gran parte di questi dati non veniva ancora registrata, essi risultano del tutto assenti e, di conseguenza, impossibili da estrarre direttamente dai file digitalizzati. Si è pertanto ritenuto necessario escluderli dalla valutazione finale, al fine di evitare distorsioni nei risultati. Questa esclusione, pur rappresentando una scelta pragmatica per il progetto pilota, mette in evidenza una delle principali sfide legate all'uso dell'IA nel settore del patrimonio culturale: la gestione di dati storici incompleti o disomogenei.

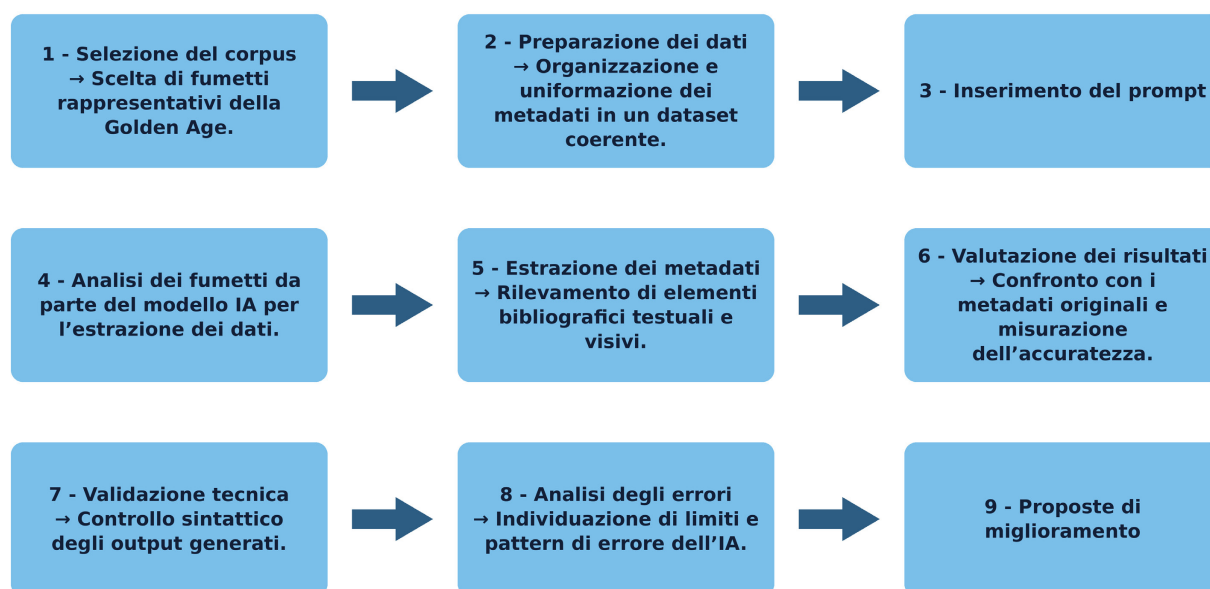


Figura 1. Schema del framework.

7. Architettura del framework e implementazione tecnica

I fumetti sono stati selezionati e caricati singolarmente in un programma progettato per integrare il modello GPT-4o di OpenAI, considerato al momento dell'esperimento il più avanzato e accessibile nel combinare elaborazione testuale e visiva. L'obiettivo era la generazione semi-automatizzata di schede descrittive di tipo bibliografico-analitico, in linea con gli standard catalografici vigenti.

Il processo si articola in tre macro-fasi operative:

1. Estrazione dei dati: ogni immagine è inviata all'LVLMM tramite un prompt ottimizzato, frutto di un processo iterativo di sintesi normativa e test sperimentali.
2. Analisi e trasformazione: il modello restituisce l'output in formato testuale (.txt) e strutturato (JSON), comprensivo di metadati bibliografici, elementi fisici e caratteristiche contestuali.
3. Valutazione qualitativa: i risultati vengono confrontati con i metadati ufficiali secondo tre livelli di accuratezza:
 - VV: completamente corretto e pertinente
 - V: parzialmente corretto/incompleto ma rilevante
 - X: errato o non pertinente

Particolare attenzione è stata riservata alla coerenza delle descrizioni, includendo anche attributi spesso trascurati, come qualità di stampa, note editoriali e presenza di contenuti pubblicitari. Il sistema è stato implementato su Google Colab con l'utilizzo della libreria Python Pillow per la gestione delle immagini, e la libreria ufficiale OpenAI per l'interazione con le API.

Campo chiave	Ground Truth (DCM)	Output IA (GPT-4o)	Valutazione	Nota qualitativa
Titolo	Jumbo Comics #1	Jumbo Comics n. 1	VV	Titolo corretto, numerazione adattata
Data di pubblicazione	Settembre 1938	1938	V	Mese assente, ma anno corretto
Editore	Fiction House	Fiction House	VV	Dato perfettamente allineato
Prezzo di copertina	10€	-	X	Dato mancante

Tabella 1. Esempi di comparazione dei risultati dell'esperimento.

8. Progettazione del prompt per l'estrazione di metadati bibliografici

Un elemento vitale del progetto è stata la realizzazione del prompt, strettamente connessa allo studio della normativa di riferimento per il trattamento catalografico dei fumetti. L'elaborazione del prompt ha seguito un approccio rigoroso, fondato su un'analisi comparativa degli standard catalografici internazionali e sulle esigenze specifiche del materiale fumettistico. Ci si è avvalsi dell'IA per attuare delibere e confrontare i vari standard, della consulenza di esperti del settore per completare e validare la scheda, tra cui docenti in ambito archivistico e IA, dirigenti dell'ICCU, dipendenti delle Biblioteche Nazionali Centrali di Roma e Firenze, membri dei tavoli tematici per la catalogazione del fumetto, nonché professionisti dell'ambito fumettistico.

La struttura del prompt riflette le categorie ritenute più rilevanti della descrizione bibliografica, adattate alle peculiarità del medium fumettistico, ed è organizzata in sezioni. Il modello così ha

potuto operare secondo una logica strutturata, volta a minimizzare omissioni e incongruenze nella descrizione bibliografica analitica.

Un aspetto innovativo del prompt riguarda l'inclusione di informazioni commerciali, raramente considerate nei sistemi catalografici tradizionali, che possono offrire spunti importanti per analisi storico-economiche o sociologiche legate alla circolazione e ricezione del fumetto.

Il prompt si conclude con una sezione dedicata alla classificazione e indicizzazione. Tuttavia, nella pratica, non è stato possibile ottenere risultati coerenti per questa sezione. Le cause principali sono da ricondurre alla specificità del materiale e all'assenza di dati espliciti nel corpus di partenza.

Per garantire l'interoperabilità con sistemi bibliografici, il prompt prevede l'esportazione dei dati in due formati di output complementari: un file di testo lineare (per la consultazione e la verifica umana) e un file JSON strutturato (per l'elaborazione automatizzata e l'integrazione con sistemi informativi). Questa doppia modalità di output facilita sia la verifica qualitativa sia l'eventuale conversione dei dati mediante mapping dei campi verso formati standard.

Nella progettazione del prompt è stata posta attenzione alla chiarezza espositiva e alla precisione terminologica, adottando un registro tecnico-scientifico adatto al contesto biblioteconomico. L'istruzione introduttiva "*act as an expert librarian and cataloger*" è stata formulata per orientare il modello verso uno standard di accuratezza e coerenza tipico della prassi professionale consolidata. Il prompt utilizzato nell'esperimento è riportato per intero in Appendice A (Figura 2); un esempio rappresentativo del corrispondente output è riportato in Appendice B (Figure 3 e 4).

Il processo di affinamento del prompt ha richiesto numerose iterazioni, test e ottimizzazioni. In ciascuna iterazione, gli output generati sono stati confrontati sistematicamente con il *ground truth*.

9. Sperimentazione e valutazione dei risultati

La valutazione dei risultati è stata condotta confrontando i metadati estratti automaticamente dal modello con quelli già presenti nel *repository* online e ricreati in un database Excel colmando eventuali lacune con altre fonti, in alcuni casi con un confronto diretto con esperti. I risultati ottenuti sono complessivamente incoraggianti: il 71,88% dei campi è stato valutato come pienamente corretto (VV), il 12,80% come parzialmente corretto (V), e solo il 15,32% come errato o mancante (X). Ciò corrisponde a circa 3.200 metadati corretti su un totale stimato di 4.500, considerando 53 campi estraibili, di cui 8 esclusi per evitare bias nella valutazione.

L'aggregato positivo (VV + V), pari all'84,68%, suggerisce un buon grado di affidabilità del framework, che si dimostra già parzialmente efficace, pur con ampi margini di miglioramento. Rispetto ad approcci documentati in letteratura, spesso basati su OCR generici o flussi semi-automatizzati di metadattazione, come nei progetti Comic Book Markup Language (CBML) (Walsh 2012, 1-4) o OCR-D, il framework proposto si distingue per un più elevato grado di automazione e una maggiore adattabilità alle specificità del fumetto.

I risultati sono stati ottenuti senza ricorrere a complesse fasi di pre-elaborazione (Lenadora et al. 2020, 5-8) o pre-addestramento. Un pre-addestramento mirato avrebbe contribuito a una maggiore uniformità degli output, che attualmente variano in modo arbitrario senza compromettere la qualità complessiva.

L'analisi qualitativa ha evidenziato una variabilità delle prestazioni a seconda delle categorie di

metadati. Alcuni campi hanno raggiunto un'accuratezza superiore all'85%; in quei casi il modello si è dimostrato efficace nell'identificazione e classificazione degli elementi visivi. Al contrario, altri campi hanno mostrato prestazioni meno uniformi, con tassi di correttezza compresi tra il 40% e il 70%. In quei casi il modello tenta inferenze basate su segnali visivi e testuali, ma la qualità delle scansioni o la scarsa leggibilità del materiale ne compromette l'accuratezza, generando dati parziali o errati.

È interessante notare che, in linea generale, il modello ha identificato i personaggi con maggiore puntualità e dettaglio rispetto a quanto indicato dall'utente che ha inserito i dati originali nel *repository*. Alcune categorie sono risultate più critiche: gli identificatori standard (es. ISBN) sono del tutto assenti, poiché i fumetti in analisi sono antecedenti alla loro introduzione; le menzioni di responsabilità (come sceneggiatore, illustratore, inchiostatore⁵) presentano un tasso di errore superiore al 75%, principalmente a causa della frequente mancanza di tali informazioni nei materiali esaminati. Analogamente, campi di natura contestuale o storica, come premi ricevuti, ristampe o note sulla prima pubblicazione, tutti dati che richiederebbero l'accesso a fonti esterne non disponibili al modello, risultano non compilati o errati.

Un ulteriore elemento critico è rappresentato dal fenomeno delle allucinazioni, ovvero la generazione di dati plausibili ma non supportati da evidenze concrete. Questi errori emergono in particolare nell'attribuzione dei ruoli creativi, dove il modello tende a replicare pattern frequenti piuttosto che estrarre fedelmente le informazioni effettivamente presenti nel materiale.

Sebbene nella maggior parte dei casi le allucinazioni si limitino a singole voci o campi marginali, è assai rilevante sottolineare che in circa dieci casi il modello ha prodotto schede interamente difformi dallo schema previsto. Si tratta di errori che hanno dato origine a brevi report narrativi o generalizzazioni, anziché seguire la struttura tabellare richiesta. Questo comportamento evidenzia una vulnerabilità di fondo del sistema, che, sebbene in fase sperimentale possa essere tollerata, pone un ostacolo rilevante all'adozione in contesti produttivi.

Tuttavia, l'analisi empirica ha mostrato che reiterando la richiesta sullo stesso fumetto fino a un massimo di tre volte, si è generalmente ottenuta una scheda conforme allo schema previsto, suggerendo che il tipo di errore sia sistematico ma la sua comparsa episodica. Questo dato rafforza la necessità di meccanismi di controllo, validazione automatica e riesecuzione condizionata (Wang et al. 2023), che possano intercettare le risposte alterate e garantire l'uniformità degli output. L'integrazione di questi strumenti rappresenta un passo importante per l'evoluzione del framework da ambiente sperimentale a sistema affidabile per l'estrazione automatica di metadati.

10. Riflessioni finali e prospettive future

L'esperimento condotto ha dimostrato come l'impiego dell'IA generativa nella metadattazione bibliografica analitica⁶ dei fumetti potrebbe costituire un valido supporto al lavoro catalografico,

⁵ Si intende quell'insieme di professionisti con un ruolo esplicito o derivato che ha portato alla realizzazione di un'opera fumettistica, ad esempio, sceneggiatore, disegnatore, inchiostatore, colorista, etc.

⁶ Va specificato, anche se già più volte indicato nella trattazione come riferimento, cosa si intende con l'attributo "analitica" in riferimento alla descrizione bibliografica. Per farlo è necessario spostare la lente direttamente sul lavoro del catalogatore, si tratta di una prassi spesso ripetitiva e condizionata da tempi ristretti, a causa dell'elevata mole di materiali da trattare.

pur evidenziando alcune limitazioni. In assenza di meccanismi automatici di validazione tramite risorse esterne, la qualità delle scansioni e la presenza effettiva delle informazioni nei documenti rimangono fattori determinanti per l'accuratezza degli output.

Come accade anche per un catalogatore umano, alcune categorie di metadati non risultano realisticamente estraibili, né attribuibili dal modello in maniera autonoma qualora siano assenti nel materiale originario. È il caso, ad esempio, della classificazione bibliografica o della determinazione della fascia d'età consigliata, che richiederebbero l'accesso a repertori normativi esterni non disponibili al sistema. Nonostante queste difficoltà, il modello ha mostrato una sorprendente coerenza nell'inferenza di tali dati, con attribuzioni plausibili nel 90% dei casi.

Sulla base dei risultati ottenuti, e con un'attenta selezione dei campi da includere, si può affermare che il metodo e il framework risultano già oggi coerenti ed efficaci come supporto al lavoro umano, in particolare se applicati alla redazione di schede conformi alle REICAT e secondo lo schema ISBD, notoriamente più sintetico rispetto alla descrizione analitica adottata in questa ricerca.

I risultati complessivi, con l'84,68% dei metadati valutati come corretti o parzialmente corretti, confermano la solidità metodologica del framework. Inoltre, l'output in formato JSON è risultato formalmente corretto nel 100% dei casi, ovvero conforme alla sintassi prevista, a prescindere dal contenuto semantico, attestandone l'affidabilità tecnica.

Ciononostante, la ricerca ha evidenziato diverse criticità che, allo stato attuale, ostacolano una catalogazione complessiva davvero efficace e affidabile. In primo luogo, per il fumetto, l'inadeguatezza degli standard catalografici tradizionali risulta evidente: questi non sono progettati per descrivere in modo esaustivo il fumetto, trattandolo piuttosto come una generica risorsa illustrata. A questo si aggiunge un'ampia frammentazione normativa e la mancanza di protocolli condivisi. Inoltre, nei fumetti "storici" come quelli del corpus è evidente la mancanza di elementi chiave come ISBN, informazioni complete sugli autori e date di pubblicazione precise. Tale lacuna compromette l'accuratezza dell'estrazione automatica.

Le limitazioni tecniche del modello emergono anche attraverso fenomeni di allucinazione; errori ricorrenti nei campi relativi alle menzioni di responsabilità e ai contenuti storici; difficoltà nell'elaborazione coerente di sequenze visive, a causa dell'assenza di memoria tra immagini consecutive. A ciò si aggiunge l'impossibilità, per il modello, di verificare dati contestuali o storici senza accesso a fonti esterne o authority file.

Nonostante questi limiti, l'esperimento ha apportato contributi rilevanti. È stato sviluppato un framework semi-automatizzato originale, basato su un modello specifico e ispirato all'approccio delle Augmented Humanities, progettato per generare schede bibliografiche analitiche da fumetti digitalizzati. Si è giunti alla definizione di un prompt specifico per questo compito, e di una scheda per il fumetto, che include elementi descrittivi bibliografici estesi, adattati alla natura del medium, con metadati sia testuali che strutturati.

L'osservazione dei fenomeni e dei risultati conferma che l'approccio proposto rappresenta una concreta opzione per implementare l'automazione di processi catalografici nel dominio del fumetto e, potenzialmente, in altri ambiti documentari con caratteristiche analoghe. Questo progetto

Per questo motivo, la descrizione tende a essere sintetica e soggetta a regole molto rigide. In questo caso, invece, si intende espandere la descrizione, andando a cogliere quelle informazioni che verrebbero escluse in una descrizione bibliografica standard.

costituisce quindi un primo passo promettente in un percorso evolutivo che, partendo dalla fase sperimentale, miri alla definizione di un protocollo operativo scalabile e replicabile, orientato all'integrazione con strumenti e risorse specialistiche, e alla validazione semantica dei metadati generati, identificata come sviluppo futuro della ricerca.

Le difficoltà riscontrate nell'applicazione della normativa catalografica vigente al fumetto, unitamente alla marginalizzazione istituzionale del medium, rendono ancor più urgente l'adozione di approcci innovativi come quello proposto, da collocare in una prospettiva dichiaratamente interdisciplinare. L'esperienza ha evidenziato la capacità del modello di interpretare contenuti ibridi, combinando efficacemente elementi testuali e visivi. Una flessibilità che apre alla possibilità di estendere l'applicazione del framework ad altri oggetti documentari, anche non illustrati.

Persistono numerose sfide: le cosiddette allucinazioni e le difficoltà nell'estrazione di dati non esplicitamente presenti dimostrano che, allo stato attuale, l'IA non sia in grado di sostituire l'expertise umana, né di compensare l'assenza di fonti esterne. Si tratta di limiti che non dipendono solo dalla tecnologia, ma anche dalla qualità e completezza del materiale di partenza, e riflettono i confini attuali delle capacità inferenziali dei modelli generativi.

Un'ulteriore direzione di sviluppo riguarda la possibilità di integrare automaticamente i metadati estratti nei sistemi informativi bibliografici, affrontando le sfide dell'interoperabilità e del mapping tra standard descrittivi eterogenei. Prima di ciò, sarà necessaria una riflessione più approfondita sull'accesso e sull'arricchimento semantico, volutamente escluso da questa fase sperimentale per non compromettere gli obiettivi principali del progetto. Si tratta di un tema che costituisce una delle sfide più importanti per una piena integrazione dell'IA nelle pratiche catalografiche avanzate.

Tutto l'impianto di questo studio è stato orientato alla ricerca di soluzioni operative e concrete a problematiche strutturali, che affliggono una delle risorse bibliografiche più diffuse, amate e al contempo trascurate. Il dibattito sulla catalogazione del fumetto appare ancora oggi frammentato e stagnante, con esperienze virtuose ma isolate.

L'esperienza documentata in questo lavoro costituisce un contributo non solo tecnico, ma anche teorico e metodologico, indicando una possibile via per l'integrazione consapevole e responsabile dell'IA nel trattamento di materiali bibliografici complessi, là dove l'intervento umano fondato su criteri standardizzati risulti difficile, se non impossibile. L'approccio proposto conferma che l'IA, se correttamente guidata, può rappresentare un alleato strategico nella valorizzazione del patrimonio culturale, in particolare per materiali non convenzionali, aprendo nuove prospettive per la descrizione, l'accesso e la diffusione della conoscenza.

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Appendice A. Prompt impiegato per l'estrazione dei metadati

Il prompt che segue, in lingua inglese, è quello impiegato nell'esperimento descritto nella sezione 8. È stato sottoposto a GPT-4o insieme a ciascun fumetto del corpus, accompagnato dalle immagini delle pagine.

```
Act as an expert librarian and cataloger according to reference standards. Analyze the comic book work I submit to you and extract the bibliographic metadata.
Main Fields:

Proper Title
Alternative or Parallel Title (if present)
Uniform Title
Original Title
Statement of Responsibility

Author/Writer
Artist/Illustrator
Colorist
Letterer
Cover Artist
Other Creative Contributors

Edition Statement
Place of Publication
Publisher
Publication Date
Standard Identifier

Physical and Technical Characteristics:

Physical Description

Numbered pages
Presence of illustrations
Dimensions
Reading Direction
Average Number of Panels per Page

Content Type
Media Type
Carrier Type
Content Language
Color
Paper Type
Binding
Standard Editorial Format

Serial and Collection Information:

Series or Collection
Issue Number
Number in Series or Collection
Editorial Format
Publication Status
Frequency

Content and Genre:

Narrative Genre
Target Audience
Number of Stories Contained
Synopsis or Summary
Main Characters
Reference Narrative Universe

Commercial Information:

Cover Price
Distribution Code
Target Market

Indicate any presence of advertising and if present, what type.
Classification and Indexing:

Decimal Classification
Subjects and Keywords
Age Classification

Notes and Additional Information:

Descriptive Notes
Note on First Publication
Note on Translation
Note on Censorship, Modifications, or Adaptations
Awards and Recognition Received
Reprints, New Editions, or Parallel Editions

Output Format:
Return the extracted data in two formats:

.txt: linear list, field by field, labeled
JSON: hierarchical structure suitable for interoperability with bibliographic systems
```

Figura 2. Prompt utilizzato per l'estrazione automatica dei metadati bibliografici dei fumetti.

Appendice B. Esempio di scheda generata

Si riporta di seguito l'output ottenuto dall'analisi automatica del primo fumetto del corpus (All True Romance, Farrell Publications, marzo 1955), selezionato dal Digital Comic Museum. L'output è prodotto nei due formati richiesti dal prompt, lineare testuale (Figura 3) e JSON (Figura 4).

```
**Main Fields:**  
- Proper Title: All True Romance  
- Alternative or Parallel Title: Intimate Love Stories  
- Uniform Title: All True Romance  
- Original Title: All True Romance  
- Statement of Responsibility: A Farrell Publication  
  
- Author/Writer: Unknown  
- Artist/Illustrator: Ruth Roche  
- Colorist: Unknown  
- Letterer: Unknown  
- Cover Artist: Unknown  
- Other Creative Contributors: Editor - Ruth Roche; Managing Editor - Robert W. Farrell  
  
- Edition Statement: No. 17  
- Place of Publication: New York, N.Y.  
- Publisher: Farrell Publications  
- Publication Date: March 1955  
- Standard Identifier: Not present  
  
**Physical and Technical Characteristics:**  
- Physical Description:  
  - Numbered pages: Not specified  
  - Presence of illustrations: Yes  
  - Dimensions: Standard comic book size  
  - Reading Direction: Left to right  
  - Average Number of Panels per Page: Varies (approx. 6)  
  
- Content Type: Text, illustrations  
- Media Type: Print  
- Carrier Type: Volume  
- Content Language: English  
- Color: Full color  
- Paper Type: Newsprint  
- Binding: Saddle-stitched  
- Standard Editorial Format: Comic book  
  
**Serial and Collection Information:**  
- Series or Collection: All True Romance  
- Issue Number: 17  
- Number in Series or Collection: 17  
- Editorial Format: Comic  
- Publication Status: Ceased  
- Frequency: Bi-monthly  
  
**Content and Genre:**  
- Narrative Genre: Romance  
- Target Audience: General audiences (teenagers and adults)  
- Number of Stories Contained: Multiple (at least 4 identified from image)  
- Synopsis or Summary: Focuses on romantic and dramatic stories  
- Main Characters: Various based on stories  
- Reference Narrative Universe: All True Romance  
  
**Commercial Information:**  
- Cover Price: 10 cents  
- Distribution Code: None identified  
- Target Market: Romance comic readers  
  
- Presence of Advertising: Yes, typical product and novelty advertisements  
  
**Classification and Indexing:**  
- Decimal Classification: Not specified  
- Subjects and Keywords: Romance, drama, relationships  
- Age Classification: Teen+  
  
**Notes and Additional Information:**  
- Descriptive Notes: Includes advice column by Roberta Bennett  
- Note on First Publication: Not the first issue  
- Note on Translation: Not applicable  
- Note on Censorship, Modifications, or Adaptations: None noted  
- Awards and Recognition Received: None noted  
- Reprints, New Editions, or Parallel Editions: None noted
```

Figura 3. Esempio di scheda generata in formato testuale lineare. Fonte: All True Romance, Farrell Publications, marzo 1955.

```
{
  "MainFields": {
    "ProperTitle": "All True Romance",
    "AlternativeOrParallelTitle": "Intimate Love Stories",
    "UniformTitle": "All True Romance",
    "OriginalTitle": "All True Romance",
    "StatementOfResponsibility": "A Farrell Publication",
    "Contributors": {
      "AuthorWriter": "Unknown",
      "ArtistIllustrator": "Ruth Roche",
      "Colorist": "Unknown",
      "Letterer": "Unknown",
      "CoverArtist": "Unknown",
      "OtherCreativeContributors": {
        "Editor": "Ruth Roche",
        "ManagingEditor": "Robert W. Farrell"
      }
    },
    "EditionStatement": "No. 17",
    "PlaceOfPublication": "New York, N.Y.",
    "Publisher": "Farrell Publications",
    "PublicationDate": "March 1955",
    "StandardIdentifier": "Not present"
  },
  "PhysicalAndTechnicalCharacteristics": {
    "PhysicalDescription": {
      "NumberedPages": "Not specified",
      "PresenceOfIllustrations": "Yes",
      "Dimensions": "Standard comic book size",
      "ReadingDirection": "Left to right",
      "AverageNumberOfPanelsPerPage": "Varies (approx. 6)"
    },
    "ContentType": "Text, illustrations",
    "MediaType": "Print",
    "CarrierType": "Volume",
    "ContentLanguage": "English",
    "Color": "Full color",
    "PaperType": "Newsprint",
    "Binding": "Saddle-stitched",
    "StandardEditorialFormat": "Comic book"
  },
  "SerialAndCollectionInformation": {
    "SeriesOrCollection": "All True Romance",
    "IssueNumber": "17",
    "NumberInSeriesOrCollection": "17",
    "EditorialFormat": "Comic",
    "PublicationStatus": "Ceased",
    "Frequency": "Bi-monthly"
  },
  "ContentAndGenre": {
    "NarrativeGenre": "Romance",
    "TargetAudience": "General audiences (teenagers and adults)",
    "NumberOfStoriesContained": "Multiple (at least 4 identified from image)",
    "SynopsisOrSummary": "Focuses on romantic and dramatic stories",
    "MainCharacters": "Various based on stories",
    "ReferenceNarrativeUniverse": "All True Romance"
  },
  "CommercialInformation": {
    "CoverPrice": "10 cents",
    "DistributionCode": "None identified",
    "TargetMarket": "Romance comic readers"
  },
  "Advertising": "Yes, typical product and novelty advertisements",
  "ClassificationAndIndexing": {
    "DecimalClassification": "Not specified",
    "SubjectsAndKeywords": ["Romance", "drama", "relationships"],
    "AgeClassification": "Teen+"
  },
  "NotesAndAdditionalInformation": {
    "DescriptiveNotes": "Includes advice column by Roberta Bennett",
    "NoteOnFirstPublication": "Not the first issue",
    "NoteOnTranslation": "Not applicable",
    "NoteOnCensorshipModificationsOrAdaptations": "None noted",
    "AwardsAndRecognitionReceived": "None noted",
    "ReprintsNewEditionsOrParallelEditions": "None noted"
  }
}
```

Figura 4. Esempio di scheda generata in formato JSON. Fonte: All True Romance, Farrell Publications, marzo 1955.

Finding Knowledge Beyond the Algorithm: Ten Reasons and a Proposal for DDC and WebDeweySearch in 2026

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ABSTRACT

In the 2026 information landscape, information retrieval is increasingly dominated by search engines and generative artificial intelligence (GenAI). While recognizing the genuine value of these technologies, this paper argues that they exhibit documented limitations, such as hallucinated citations, visibility bias, and the progressive fragmentation of knowledge. This position paper presents a critical analysis supporting the continued relevance of the Dewey Decimal Classification (DDC) and the WebDeweySearch platform as epistemological infrastructures for organizing and exploring knowledge. Through a hierarchical and disciplinary logic, the DDC is interpreted not merely as a cataloging tool, but as a cognitive map capable of fostering structured serendipity, disciplinary contextualization, and global semantic interoperability. The analysis further highlights how the stability of numerical notation mitigates the effects of terminological shift and misinformation, ensuring transparency and accountability in knowledge organization. Finally, the paper explores the DDC's potential as a complementary framework for AI, particularly within Retrieval-Augmented Generation (RAG) architectures, where it provides the semantic grounding necessary to counteract algorithmic drift. From this perspective, the DDC emerges not as a legacy of the past, but as a critical component for preserving epistemological rigor in the contemporary digital ecosystem.

KEYWORDS

Dewey Decimal Classification (DDC); WebDeweySearch; Retrieval-Augmented Generation (RAG); Knowledge organization; Information retrieval.

Introduction

This paper is conceived as a position paper and does not aim to provide systematic empirical validation of the arguments advanced. Rather, it develops a logical-theoretical argument aimed at highlighting the strengths of classification systems—and in particular the Dewey Decimal Classification (DDC)—in facilitating comprehensive, systematic, and guided forms of documentary research based on selected and structured corpora.

From this perspective, the complementarity of other approaches to information retrieval is also acknowledged: keyword-based systems are recognized for their speed and effectiveness in searches aimed at solving practical problems, while artificial intelligence systems based on large language models (GenAI), one of the many “Artificial Intelligences” (Mitchell 2022), are recognized for their ability to produce syntactically correct and pragmatically effective texts.

The primary aim of this paper is to argue for the relevance of DDC-based systems—particularly WebDeweySearch—as tools for structured information retrieval. A secondary aim is to explore how DDC may also contribute to improving AI-based systems.

The contribution is directed in particular at information professionals, scholars of Library and Information Science, and researchers interested in the intersections between knowledge organization and artificial intelligence. It aims to argue that, in the current landscape, different systems—classification schemes, thesauri, information retrieval systems, and artificial intelligence systems—perform complementary functions in meeting information needs.

This paper adopts a conceptual and argumentative approach. While it draws on selected literature to support the discussion of limitations in contemporary information retrieval systems and generative artificial intelligence, the core of the paper develops a theoretically informed position based on analytical reasoning about the structural properties of classification systems, particularly the Dewey Decimal Classification.

The limitations that we are going to signal for keyword searches or searches using generative AI do not mean that they are not useful — to claim otherwise would be implausible given their widespread use by billions of people and many libraries have implemented or are currently implementing systems that use them (Boateng 2025; Santosa 2025) — but only that relying exclusively on these tools for any informational need risks exposing users to errors, failure to identify relevant documents, and citations of documents that do not exist.

These systems represent a genuine advance in accessibility and text synthesis, and their widespread adoption reflects real user needs. The limitations discussed here are structural rather than incidental, but do not diminish their value for many tasks, particularly in applications where accuracy of reference is not required or the truth of the statements is not essential.

The structure of the text is the following: the first section examines the limitations of contemporary information retrieval systems; the second presents the advantages of DDC-based approaches through a set of arguments; the final section outlines a proposal for integrating DDC within AI-driven architectures.

In the contemporary 2026 information landscape, searching for books using the Dewey Decimal Classification (DDC) offers a distinctive approach to information retrieval—one based on disciplinary structure rather than algorithmic ranking or statistical inference.

A keyword search on platforms such as Google or Amazon primarily identifies the occurrence of terms within documents, and while increasingly supported by semantic ranking techniques, it does not explicitly represent the underlying conceptual relationships between topics (Pasquale 2015).

Generative artificial intelligence tools can produce text and, potentially, citations based on statistical inference that conveys apparent certainty, yet lacks any systematic guarantee of authenticity, completeness, or epistemic reliability.

In their current implementations, text-generation programs based on large language models (GenAI) tend to be structurally prone to inaccuracies in citation generation. Rather than verifying the existence of a document against a real-time database, these models are designed to predict linguistically plausible text, functioning as text generators that prioritize linguistic plausibility, often at the expense of factual accuracy. This makes them prone to producing “hallucinatory” references: fabricated citations that appear authentic but do not exist, complete with fictitious authors, real journal names, and non-existent DOIs. Falsification rates can be substantial in certain contexts. For example, Dahl et al. (2024), studying legal applications of large language models, documented frequent fabrication of legal citations. Likewise, Linardon et al. (2025), in an experimental study on mental health research, showed that citation fabrication varied according to topic familiarity and prompt specificity, with unsupported references remaining a significant problem even under carefully designed prompts.

A related limitation concerns the temporal coverage and the document archives used. Most current GenAI models are trained on fixed datasets and largely limited to what is accessible online; therefore, they do not reliably incorporate recent publications, works inaccessible online because they are held in restricted archives, or even the texts of older studies that have never been digitized—all elements that could be essential for a comprehensive literature review.

One of the primary causes of these limitations lies in the way natural language models process language. Rather than retrieving verified records, they generate citations through pattern matching: they predict the statistically most likely sequence of words that resembles a reference entry (Lissack and Meagher 2024). The result is often very convincing—plausible author names, familiar journal titles, realistic formatting—which can make it difficult, particularly for non-expert users, to identify fictitious citations without manual verification (Perc 2025).

This dynamic introduces a systematic visibility bias. The GenAI-generated citation patterns perform reliably when reproducing frequently cited, high-profile articles, but they tend to underperform with niche, specialized, or low-circulation research, for example research published in languages other than English or exclusively in print publications. The result is a so-called “Matthew effect” (Merton 1968, 1988), in which already popular works are further amplified and cited at the expense of more relevant but lesser-known ones (Algaba et al. 2025).

Finally, unless a system uses Retrieval-Augmented Generation (RAG), GenAI does not, by default, query the Internet in real-time or verify the existence of a document. Even RAG-enabled models, however, are not immune to problems. Empirical analysis has identified multiple structural failure points in RAG architectures: retrieved documents may lack the relevant content entirely, relevant passages may fail to be ranked highly enough to enter the generation context, or correctly retrieved information may not be adequately integrated into the final response (Barnett et al. 2024). Moreover, hallucinations can persist even when retrieval is nominally successful, since the quality of the generated output depends not only on document selection but on ranking, chunking, and the model’s subsequent interpretation of retrieved passages (Niu et al. 2024; Afane

et al. 2026). These limitations have driven a significant body of recent research toward what has been described as ‘Retrieval and Structuring Augmented Generation’ — architectures in which retrieved information is organized through explicit semantic structures such as taxonomies, hierarchies, and knowledge graphs before being passed to the generative model (Jiang et al. 2025). Studies consistently show that *ontology1-guided* and *graph-based* approaches substantially outperform purely vector-based retrieval, particularly in disambiguation, multi-hop reasoning, and domain-specific tasks (Cruz, Tavares, and Belo 2025; Jiang et al. 2025).

Gajderowicz, Bhardwa and Fox (2026) review the intersection of *ontological structures* and RAG, showing how *ontologies* support query disambiguation, validation, and structured retrieval. It is within this landscape that DDC’s hierarchical structure acquires renewed relevance — not as a replacement for computational retrieval, but as a pre-existing, human-curated semantic framework capable of constraining and orienting retrieval in ways that purely statistical methods cannot fully replicate. No system, however, eliminates these problems entirely: structured semantic scaffolding reduces but does not eliminate ambiguity, drift, and context loss, and its effectiveness depends on the quality and granularity of the underlying knowledge organization.

These structural limitations suggest that contemporary information retrieval may benefit from complementary knowledge organization systems specifically designed to provide stable disciplinary contexts and transparent semantic organization.

DDC: A Tool That Remains Valuable

While other tools contribute significantly to information retrieval, they also exhibit inherent limitations; DDC, by contrast, should be interpreted not merely as a classificatory tool, but as an epistemological infrastructure, one that situates ideas within a coherent framework of knowledge. Unlike retrieval systems optimized for engagement metrics, DDC was designed with a different goal: to represent the relationships between fields of knowledge, not simply to highlight the most popular documents or produce results that convey a sense of certainty grounded in plausibility rather than verification. This distinction—often overlooked in discussions of digital discovery—becomes increasingly relevant in an environment saturated with AI-generated content and opaque ranking systems.

To illustrate this point, the main advantages of a DDC-based document retrieval system such as WebDeweySearch² can be examined.

WebDeweySearch systems—available in different linguistic versions—provide users with direct access to the full hierarchical structure of the Dewey Decimal Classification. Through these platforms, users can navigate the classification tree across all levels, from general classes to highly specific subdivisions.

In addition to hierarchical browsing, users can perform searches based on the verbal expressions associated with DDC classes, including both class headings and terms from the Relative Index, thereby identifying the most relevant classification numbers for their information needs.

¹ In this sense, “ontology” must be understood as a technical term referring to a formal, machine-readable representation of knowledge within a specific domain.

² There are currently four versions of the WebDeweySearch system, corresponding to the German, Swedish, and Norwegian editions of the DDC, and, starting in 2026, the Italian edition.

Once the appropriate class numbers have been identified, users can use them as structured search keys within one or more library catalogs (OPACs), querying either a specific class number or expanding the search to include all subordinate classes within the hierarchy. This may enable both precise and comprehensive retrieval of relevant documents from bibliographic records enriched with DDC notations, typically corresponding to curated and professionally developed collections. In this way, WebDeweySearch functions not only as a classificatory interface, but as an intermediary layer connecting the semantic organization of knowledge with the retrieval of verified bibliographic resources, and can be understood as a fully-fledged information retrieval tool in its own right.

Records retrieved through WebDeweySearch correspond to verified documents, often curated within thoughtfully assembled collections. While it is acknowledged that library collections inevitably reflect institutional choices and potential imbalances, they nevertheless can be understood, in most cases, as curated corpora,³ distinct from the more open and less curated information environment of the web.

Before beginning to outline the advantages of using the DDC as a knowledge organization system for searching for information sources, it is important to highlight a significant limitation of its use in the real world: the DDC is used almost exclusively to index documents in the form of books or, at most, pamphlets, while articles or other types of contributions contained within books are excluded. This limitation should be explicitly acknowledged when considering the arguments that follow. To address the challenges of searching for these other types of documents, the analysis should have been extended to other classifications, such as the JEL classification,⁴ the Mathematics Subject Classification (MSC),⁵ or other indexing tools—subject headings or thesauri—such as MESH,⁶ which share some of the DDC’s strengths, lack others, and possess features not found in the DDC. This extension would have gone beyond the scope of this work and will therefore be left for possible future developments.

1. Serendipity: the serendipitous discovery, or the “shelf effect”

In a digital environment, users tend to retrieve exactly what they search for—or rather, what retrieval systems return based on algorithmic or statistical models—and little else. This is not a flaw in keyword-based systems; it is their design logic. But it results in a measurable epistemic cost: the suppression of serendipitous discovery (Pievani 2021).

DDC, on the other hand, is based on the principle of placement—that is, the systematic positioning of works related to interconnected topics within a contiguous classification space (Mitchell and Vizine-Goetz 2009). This is not random but reflects Melvil Dewey’s assumption that knowledge is

³ By “curated corpora” we refer to collections developed through professional selection, cataloging, and acquisition processes, which may nonetheless reflect institutional priorities and limitations. The most significant exception is represented by legal deposit library collections, which comprise the entire bibliographic output of a country or region; consequently, their growth is not driven by the libraries’ own acquisition policies.

⁴ JEL Classification System / EconLit Subject Descriptors. <https://www.aeaweb.org/econlit/jelCodes.php?view=jel>

⁵ 2020 Mathematics Subject Classification. <https://mathscinet.ams.org/msc/msc2020.html>

⁶ MESH <https://www.ncbi.nlm.nih.gov/mesh/>

fundamentally relational rather than atomic (Wiegand 1996). A book does not simply belong to a single subject; it belongs to a system of contiguous ideas, a system based on the disciplinary mode through which humans produce knowledge.

In practice, whether consulting a physical shelf or a virtual one via WebDeweySearch or another class-navigation tool, a user examining the class “Economics of Climate Change” (333.72) will find nearby the class and documents on “Renewable Energy Resources” (333.79). This adjacency is not an algorithmic suggestion based on co-citation or the purchasing behaviours of a more or less large number of customers, but is structural, determined by the intellectual architecture of the classification itself. It is less susceptible to manipulation, personalization, or commercial prioritization. Its structure is determined through the collective decisions of distributed expert bodies with international participation, with diverse backgrounds and interests, and is subject to the oversight of a professional community capable of identifying and correcting both specific errors and systemic shortcomings.

A useful example can be found by searching for the term ‘dog’ in the Italian WebDeweySearch. This returns 190 results. Most of these correspond to names of dog breeds, but one also finds the main number for general works on dogs (636.7) falling within the field of animal husbandry, all specific treatments and behaviours of dogs, topics relating to dogs falling within the field of zoology (599.772), canine veterinary medicine (636.7089), the use of dogs in sports (Hunting with dogs, 799.234) and recreational activities (Dog racing, 798.8), police dog services (363.2) and also dogs in literature (e.g. 809.933629772). Upon selecting one of these 190 subjects, the user is presented with the corresponding number within the subject hierarchy, with the option to explore higher and lower levels, as well as related classifications. Whenever the user decides that a number may be of interest to them, they can access an OPAC – in the Italian case, that of the National Library Service – to view the works indexed under the chosen number.

For information professionals, this aspect is of considerable relevance and goes far beyond the mere search for documents and information. In the development of collections, subject classification reveals gaps and development needs: if a library holds resources under call number 333.72 but few documents under 333.79, the shelf—whether physical or virtual—communicates this imbalance. Classification transforms consultation into a sort of audit of the collection.

While research on digital information behaviour has extensively analyzed how users encounter information serendipitously and how digital environments can be designed to foster or inhibit this phenomenon (Makri and Blandford 2012a; 2012b; Makri et al. 2014), the specific role of hierarchical subject classifications as engines of structured serendipity remains one of the least theorized. As research on information behavior consistently demonstrates, users, even professional users, often cannot articulate verbally what they need until they find it. Subject classification creates the conditions for this encounter; keyword search, by its very nature, does not systematically enable such encounters in the same structured manner.

2. A universal language for organizing knowledge

DDC’s use of Arabic numerals is not merely a matter of practicality, but a deliberate design choice for interoperability that has proven extraordinarily effective over the course of a century and a half

(Wiegand 1996). In an era of multilingual digital collections and data sharing among institutions, DDC's numerical notation—thanks above all to its global reach—can provide a level of document organization independent of natural languages, alphabets, syntax, and morphology.

Thanks to this feature and the availability of more than 30 translations in addition to the English edition, DDC can be considered as a globally shared classification framework that could (and should) be applied to other formats, even if current library practice limits it to monographs. A researcher in Tokyo, a student in Nairobi, and a cataloger in Paris all work with the shared understanding that numbers in the 500 class indicate the natural sciences. No translation is required at the classification level, even when the bibliographic records themselves are in different languages (Panzer 2008).

More recently, DDC classifications have also become relatively stable identifiers within interconnected data environments. Building on the Dewey Linked Data initiative, OCLC has progressively developed persistent URIs for DDC numbers, enabling their use as globally identifiable semantic resources. Although the implementation of this infrastructure is still evolving, the hierarchical structure and international diffusion of DDC already support semantic interoperability across different information systems (Mitchell 2013; OCLC 2024; 2025).

As libraries adopt RDF-based metadata frameworks and publish their catalogs as linked open datasets, Dewey URIs are intended to serve as stable, globally resolvable identifiers, capable of connecting bibliographic resources across institutions that share the same semantic framework. A query built around a Dewey URI can, in principle, retrieve relevant resources from any institution that has mapped its metadata to the same ontological framework, regardless of the language in which those records were created.

This positions DDC not merely as a cataloging tool, but as a semantic interoperability infrastructure. In a landscape where FRBR, BIBFRAME, and schema.org compete for dominance in bibliographic description, the structure of DDC's classifications can offer a relatively stable reference point for alignment across different institutions for sharing data in a semantically interoperable way—a function that any keyword-based system can hardly replicate, given the barriers that natural languages create for defining one-to-one correspondences.

3. Hierarchical Logic vs. Keyword-Based Retrieval

Keyword retrieval is typically organized as a flat result set, even when supported by underlying semantic or relational models. A search engine indexes terms and returns documents ranked by relevance signals, but it does not represent the logical relationships between these terms (Svenonius 2000). Homonyms, polysemy, and specialized jargon introduce noise that users struggle to manage. The hierarchical structure of DDC addresses this problem at the architectural level—we might say natively. Classification proceeds from the general to the specific through a strictly hierarchical logic:

- 500 – Natural Sciences
- 510 – Mathematics
- 516 – Geometry
- 516.3 – Analytical Geometry

Each level represents a progressively more specific subdivision of the one above it, meaning that navigating the hierarchy allows users to refine their search with greater precision, without requiring them to know specific terminology in advance. A student unfamiliar with the term “analytical geometry” can still find relevant material by starting at level 510 and moving logically down through the structure.

This has direct implications for library practice during reference consultations. When a user asks a vague or poorly formulated question, DDC hierarchy can provide a shared framework for the conversation: the librarian can probe to understand where to place the user’s question within the knowledge tree; they can then move up or down the chain of classifications, engaging in a collaborative process of intellectual clarification based on a solid, shared structure, transforming a retrieval operation into a genuine learning experience.

Furthermore, hierarchical classification can support systematic literature reviews in ways that keyword searches often cannot fully replicate. A researcher requiring comprehensive coverage of a domain can define it using its DDC range and be confident that the resulting set of books reflects an intellectual boundary based on sound principles, rather than an arbitrary keyword match.

4. Countering the Fragmentation of Information

A major transformation in the contemporary information environment is the transition from document-level retrieval to the extraction of information fragments. AI-based search systems increasingly return extracted passages, summaries, or generated responses, rather than complete documents situated within a disciplinary context. The result is a form of decontextualized or weakly contextualized knowledge: excerpts separated from the interpretive contexts that actually give them meaning, excerpts that create confusion and misinformation (Floridi 2020; Bender et al. 2021; Carr 2025).

DDC operates according to the opposite logic: each classification number is simultaneously an index for retrieving one or more documents and a disciplinary indicator. When a cataloger assigns a DDC notation, they do not merely organize a physical or digital object, but can be interpreted as making an epistemological statement about the placement of this work within the structure of human knowledge.

Consider a work on trains. Assigned to category 385 (Rail Transport), it is contextualized within the economic and social history of mobility. Assigned to category 625.1 (Railway Engineering), it belongs to the tradition of applied mechanics and infrastructure design. The same information object takes on significantly different intellectual interpretations depending on its classification, and that meaning is made explicit, stable, and searchable in a way that no keyword tag or presence in the form of an excerpt within a text generated by GenAI can reliably enable.

For information professionals engaged in high-quality metadata work (Jelani A. and Ashkar 2025), this underscores the importance of subject analysis as an intellectual act, not merely a bureaucratic one. With the proliferation of automated cataloging tools, the risk of classification drift—numbers assigned through pattern matching rather than conceptual judgment—is real. The hierarchical rigor of DDC can offer a standard against which such drift can be detected and corrected.

5. WebDewey: A Living System

The perception of DDC as a static and obsolete system is not supported by empirical evidence. Over the past 15 years, the transition to WebDewey has produced a continuously updated and dynamically managed classification infrastructure, capable of responding to emerging fields with a speed and specificity that previous print editions could not achieve. The current DDC evolves rapidly, but always on the basis of a system whose “engine” is grounded in human intellectual judgment and the consensus of bodies such as the EPC, EDUG, and ultimately a community of professional users (OCLC 2026).

The tables of the current DDC include classifications dedicated to Artificial Intelligence and its various branches (006.3), as well as many class numbers based on its application to numerous disciplinary fields. Studies on LGBTQ+ topics or Sustainable Development—areas that were not previously represented or were underrepresented in previous editions—can now be indexed with greater precision. The editorial process, overseen by the Editorial Policy Committee and supported by a global network in which EDUG plays an essential role, involves ongoing consultation with subject specialists, ensuring that new numbers reflect genuine disciplinary consensus rather than terminological trends.

A classification system that cannot accommodate new fields of knowledge forces catalogers to rely on makeshift solutions: overly generic numbers, inconsistent local practices, or reliance on subject headings to convey the specificity that a static classification cannot provide. WebDewey’s continuous updating model reduces this friction and maintains the system’s ability to serve as a reliable map of current knowledge.

The tension between the stability of classifications and the continuous updating of semantic content could be one of the key elements of the contemporary DDC, allowing the system to maintain structural consistency while adapting to the evolution of disciplinary domains.

Finally, for institutions participating in cooperative cataloging, WebDewey updates directly impact the quality of shared records. When DDC is updated, these updates are proposed for propagation across the cooperative network: a systemic advantage that a locally managed keyword taxonomy or subject index would struggle to replicate.

6. DDC as a cognitive map, not just a retrieval tool

Keyword searches and AI-powered chatbots provide answers. DDC seeks to provide guidance within the disciplinary framework of knowledge.

When a user receives a list of results from a keyword query, they get documents, but they do not understand how these relate to one another or to the broader field of study. The logic of the search engine is invisible, and the placement of suggested documents within the disciplinary system remains opaque. The user has no map, only a list. Even more cryptic are the suggestions from a chatbot that uses GenAI to generate responses.

DDC, by contrast, functions as a cognitive cartography of knowledge (Miksa 1998). When a researcher places a topic under heading 301 (Sociology) rather than 150 (Psychology), they are not merely finding a shelf location, but are learning something about the disciplinary boundaries of their inquiry. Which academic tradition addresses this problem? What methodological assumptions arise from it? What language do the authors of the document use?

The classification number is informative in and of itself, regardless of the specific document it refers to. (Bowker and Star 2000)

This is particularly valuable for novice researchers, doctoral students, and even undergraduate students in advanced courses who are entering an unfamiliar field of study. A keyword search for “identity” yields an indistinct heterogeneous set of results ranging from philosophy to psychology, from sociology to computer science and marketing. A DDC-based search forces the user to first identify where the meaning of the word “identity” they are interested in fits, and in doing so, they learn something about the structure of the discipline they are entering.

In an era where AI-powered chatbots provide confident, fluid answers that conceal the epistemological assumptions underlying them, DDC’s transparency regarding disciplinary boundaries can function as a corrective mechanism.

7. Resistance to misinformation and low-quality content

Keyword search indexes the web as it is, including disinformation, SEO-optimized noise, and AI-generated filler content. The ranking signals that determine what appears at the top of results (backlinks, engagement, publication date) do not necessarily correlate with intellectual quality or academic reliability (Noble 2018; Gillespie 2010).

DDC-based retrieval typically operates within a different quality ecosystem, since it is generally embedded in professionally curated collections and cataloging practices. To receive a DDC number, as we have already mentioned, a work must undergo a document selection process and professional cataloging, typically performed by qualified library staff who apply the DDC schema and established quality standards. This process functions as an implicit, albeit not infallible, quality filter: DDC operates within library collections, which themselves are curated through acquisition. The effectiveness of this filter depends on the quality of the cataloging work itself: inconsistent or automated classification practices can introduce errors and reduce the reliability of DDC-based retrieval, meaning that the system’s structural strengths are only fully realized when supported by rigorous professional practice.

Nevertheless, relying on selected documentary sources does not make DDC-indexed collections free from bias: the development of collections has its own biases and gaps. It does mean, however, that a DDC-based search operates within a curated corpus rather than an open, unmediated one. For users seeking academic material or high-quality content, this distinction is certainly relevant. With the proliferation of AI-generated content and the growing difficulty of distinguishing it, at first glance, from content created by humans, the value of retrieval systems based on professionally developed collections can only increase. Library catalogs and the collections they index can offer a form of structural mitigation against content pollution that keyword-based search algorithms may currently struggle to match consistently.

8. Support for Interdisciplinary Research

One of the most significant challenges in the contemporary research environment is navigating interdisciplinary territory (Thompson Klein 2021; Thompson Klein and Philipp 2023): topics that

lie at the intersection of two or more established fields and may therefore be classified under multiple sections within the Dewey Decimal Classification system.

This apparent complexity actually can be an advantage. A researcher working at the intersection of environmental law and economics can consciously consult both section 344.046 (Environmental Law) and section 333.7 (Economics of Natural Resources), using the classification system as a tool to map the disciplinary topology of their research problem. Furthermore, DDC's subject index offers a series of cross-references between different disciplinary treatments of the same subject or between related subjects, which can facilitate the mapping process.

This approach is difficult to replicate through keyword-based search alone, because keywords do not encode disciplinary affiliation, but only lexical content.

DDC's auxiliary tables, which allow classifiers to specify geographical, linguistic, temporal, and formal aspects, can also help enhance the system's internal relationality, enabling the addition of analytical dimensions that highlight facets present across a variety of subjects. A work classified as 305.4209492 is not simply "concerning women" (305.42), but specifically concerns women in the Netherlands (09492), within a historical context. This precision is encoded in the number itself, invisible to keyword searches but immediately readable by an expert user. The presence of both concepts—women and the Netherlands—across multiple DDC classes can offer users the opportunity to explore the classification beyond its hierarchical structure.

For systematic reviews and scoping studies, where comprehensive and reproducible subject coverage is a methodological requirement, DDC-based search strategies offer a level of reproducibility and transparency that keyword searches cannot enable. Two researchers performing the same DDC-based search in the same catalog are likely to obtain broadly comparable sets of results when operating within the same catalog and classification framework.

9. Independence from Changes in Language and Terminology

Academic and professional terminology is subject to continuous evolution; terms fall out of use, acquire new connotations, or are replaced by preferred alternatives for political, cultural, or scientific reasons. Keyword-based searches are inherently sensitive to these shifts: a search strategy relying solely on contemporary jargon may overlook decades of literature published using terms that were preferred in the past or that remain confined to specific scientific circles.

DDC exhibits a structural resistance to these terminological changes because, while verbal expressions are updated, the class numbers remain constant. Furthermore, terms are rarely eliminated unless they are considered entirely obsolete or culturally unacceptable. Because classification numbers are assigned based on conceptual essence rather than surface-level vocabulary, a work once indexed under the label of "racial relations" and a modern study on "structural racism" can both be anchored to the same notation (305.8), even if they share no common keywords.

A similar, and perhaps even more significant, problem arises when different cultures adopt divergent approaches to the same concept. A poignant example is the treatment of "race": the English DDC identifies the notation 305.809 with the index term "White race," whereas the Italian DDC—in different national implementations of DDC, terminology and index terms may reflect local linguistic and cultural conventions—utilizes the expression "Popolazione bianca". Despite

these linguistic and cultural differences, works discussing the same group of human beings are unified under the same classification number.

The DDC number can thus serve as a conceptual anchor across time, culture, and context, regardless of how the associated terminology evolves. This has profound implications for retrospective bibliographic research—a requirement in historical and legal studies—where a DDC-based strategy can retrieve older literature that keyword searches using current terminology would bypass. Ultimately, this framework helps overcome the lack of parallelism between different linguistic domains, providing information professionals with a strong argument for DDC classification as a vital, stable complement to keyword retrieval.

10. Accountability and Transparency in Knowledge Organization

AI-based chatbots raise some epistemological challenges: they generate responses without revealing their sources, training data, classification logic, or confidence level. The user receives an answer but cannot verify the process that produced it. Unlike traditional information retrieval systems, generative models do not enable a direct linkage between generated textual strings that may resemble citations and existing documents, unless explicitly supported by external retrieval mechanisms. These are not merely practical inconveniences, but raise structural challenges for the informed and critical use of information which, evidently, create ethical and political problems that go far beyond simple bibliographic research. (Floridi 2023; Pollicino and Dunn 2024; Matsieli and Mutula 2025).

DDC, by contrast, is a relatively transparent and well-documented system. Its tables are published and maintained in publicly accessible form. Its editorial decisions are recorded and traceable. Its hierarchical logic can be systematically examined, critiqued, and taught. When a classification number is assigned, the reasoning behind it is, in principle, reconstructible by trained users or catalogers.

This transparency supports information literacy education in a way that opaque artificial intelligence systems cannot. Teaching a user how DDC works provides a transferable mental model of knowledge organization. Teaching a user how a specific search algorithm works is, in most cases, impossible: the algorithm is proprietary, constantly evolving, and deliberately obscured. Even in the case of AI programs based on machine learning and deep neural networks, only usage strategies can be taught, but the actual processes executed by the model - stochastic processes - remain largely opaque due to the system's architectural design.

As the profession increasingly grapples with issues of algorithmic accountability in information retrieval, DDC's longstanding commitment to a documented classification logic—based on sound principles and publicly available—stands as a model worth considering and further developing within library and information science communities.

DDC has not been and is not free from problems—including American-centrism, Western epistemological bias, and other culturally situated limitations—but unlike a proprietary (black box) algorithm, the biases of DDC can be identified, discussed, and corrected publicly precisely because DDC can be interpreted as a “transparent and open to criticism” system.

These critical issues should not be underestimated, but rather considered as elements of any his-

torically situated system that requires continuous critical review and updating based on an awareness of the culturally determined context of every system for interpreting reality.

A summary table is presented below comparing document searches based on keyword systems or generative AI models with those conducted using the DDC through digital platforms such as WebDeweySearch or WebDewey itself.

<i>Functionality</i>	<i>AI-Powered Search (GenAI)</i>	<i>Keyword Search (IR)</i>	<i>Dewey Decimal Classification (DDC)</i>
Primary objective	Generation of plausible, syntactically correct text	Retrieval of specific items/terms	Mapping of a disciplinary domain
Underlying logic	Statistical likelihood / Probabilistic inference	Relevance and popularity algorithms	Intellectual and hierarchical structure
Search methods	Prompt-dependent; statistically driven	Query-dependent; lexical matching	Structure-dependent; hierarchical navigation
Disciplinary context	Absent or weakly inferred	Absent or user-defined	Explicit, stable, and foundational
Interoperability	Platform-specific (Proprietary)	Platform-specific (Opaque)	Globally standardized (Universal Schema)
Resistance to manipulation	Low: Susceptible to prompt injection, training bias and sponsored inference (ad-sustained bias)	Low: Susceptible to SEO and commercial ad-ranking	Relatively high: editorially controlled at the system level; at the application level it may vary.
Support for a systematic literature review	Limited: High risk of “hallucinated” citations	Limited: Dependent on terminology and user expertise	Strong: May support more systematic disciplinary coverage within DDC-indexed collections.

Keyword Search – AI-powered search vs. DDC: A Comparative Analysis.

A Possible Extension: DDC in AI Contexts

Regarding the issues of reliability, transparency, and accountability posed by AI systems, the DDC could act not only as a critical alternative but also as a powerful technological ally for artificial intelligence itself, especially within Retrieval-Augmented Generation (RAG) architectures (Friedrich, Akbari, and Fürstenau 2026). The integration of Dewey notations into document metadata allows for the retrieval of information to be anchored to a curated and stable semantic structure. Instead of relying exclusively on statistical or vector proximity - which in certain configurations can be prone to thematic drift or hallucinations - an advanced system can use the DDC hierarchy to filter or weight retrieved text fragments, supporting the generative model in drawing primarily from coherent disciplinary contexts.

In this scenario, classification ceases to be limited to a passive organizational role and becomes instead a dynamic contextual filter for information retrieval. By mapping a query to a specific DDC class before generation begins, the system can reduce its exposure to irrelevant or weakly related data clusters that happen to share superficial lexical similarities with the prompt. This “classification-aware” AI would not only provide responses, but could also explicitly state its epistemological

routing (e.g., “*This answer is primarily grounded within Engineering [620] rather than Economics [330]*”), restoring the disciplinary context that current GenAI platforms typically flatten. In this framework, the DDC does not eliminate the inherent fragmentation of AI-based retrieval systems, but it can help to structure and semantically link that fragmentation, mitigating the risks of de-contextualization.

This interpretation is consistent with a long tradition in Knowledge Organization research that understands classification not simply as a mechanism for document retrieval, but as an instrument for representing relationships among concepts and for shaping the intelligibility of knowledge domains (Miksa 1998; Svenonius 2000; Bowker and Star 2000).

From this perspective, the DDC may be examined as a semantic and epistemic structure whose significance extends far beyond mere bibliographic control. As a hierarchical system of notational distinctions, the DDC contributes to structuring domains of knowledge as retrievable and navigable conceptual spaces; it does not simply describe subjects, but establishes explicit relationships among them, providing a framework within which documentary resources can be interpreted. When such a structure is integrated into a retrieval-augmented architecture, the classification system becomes an active structure for organizing retrieval pathways: a set of rules governing not what is known, but under what conditions something may be retrieved, recombined, and made meaningful within a given epistemic context.

Recent developments in retrieval-augmented generation increasingly move beyond purely vector-based retrieval toward architectures that incorporate structured semantic scaffolding, such as hierarchies, ontologies, and knowledge graphs (Jiang et al. 2025). In hierarchical RAG approaches, multi-level indexing structures are explicitly used to control retrieval granularity and preserve semantic organization across different levels of abstraction, from coarse thematic clusters to fine-grained document segments (Huang et al. 2025). Similarly, graph-based retrieval systems introduce hierarchical or community-based indexing schemes in which documents and entities are organized into layered structures that guide retrieval and reduce search complexity (Wang et al. 2026). Other approaches explicitly reconstruct retrieval as a tree- or graph-traversal process, preserving structural relations during search and enabling multi-level semantic navigation (Wei et al. 2026).

Taken together with the structural failure points identified in standard RAG implementations (Barnett et al. 2024), these developments indicate a clear convergence toward retrieval systems in which structured taxonomic or ontological representations function not as passive metadata, but as active constraints on retrieval, query expansion, and semantic routing (Jiang et al. 2025; Gajderowicz, Bhardwaj, and Fox 2026).

Within this landscape, the Dewey Decimal Classification can be understood as a pre-existing, globally standardized, and human-curated ontology whose structural virtues function in ways analogous to the routing mechanisms now emerging in GraphRAG and ontology-guided frameworks. The notational hierarchy acts as an explicit routing mechanism across conceptual fields, while scope notes, relational cross-references (“see” and “see also”), and Relative Index entries serve as local boundary conditions that stabilize meaning, resolve lexical ambiguity, and anchor concepts within a robust associative network.

Consequently, the DDC offers foundational design principles for future retrieval architectures, navigating a pre-segmented interpretive space where meaning is rigorously co-produced by vector similarity and taxonomic hierarchy.

Discussion

In an information ecosystem increasingly characterized by the hyper-personalization of algorithmic rankings, the deceptive fluency of generative AI, and the erosion of document integrity via decontextualized fragments, the Dewey Decimal Classification emerges as a vital, structured counter-model. While contemporary search environments prioritize engagement metrics and probabilistic plausibility, the DDC preserves explicit relationships between intellectual domains through a transparent, hierarchical architecture that safeguards disciplinary context.

The arguments developed throughout this paper converge on a central premise: the DDC does not merely organize physical or digital objects; it organizes knowledge itself. This distinction becomes paramount at a historical juncture where the boundary between information retrieval and text generation is increasingly blurred. Keyword search isolates individual terms, and generative AI synthesizes plausible prose; the DDC, conversely, situates information within an inspectable, relational framework that actively fosters user learning and critical navigation. These modalities are fundamentally complementary, and the objective of this analysis has been to illuminate the unique, irreplaceable value of classification systems at a moment when they risk being overshadowed by statistical computational paradigms.

To maintain analytical rigor, some structural objections to this position must be explicitly acknowledged. First, the operational scope of the DDC is inherently constrained by its traditional focus on monographic literature, leaving journal articles, conference proceedings, and digital-born grey literature largely unindexed by its main notations.⁷ While this is a genuine limitation, it points toward the need for future integrations with complementary indexing tools rather than an abandonment of the model. Second, the DDC carries its own well-documented historical and ideological biases, including Western epistemic frameworks and Anglo-American centrality. However, unlike proprietary “black-box” ranking algorithms whose biases remain hidden and commercially protected, the DDC operates as an open, transparent, and publicly documented system whose shortcomings can be systematically identified, debated, and corrected by an international community of professionals. Third, practical deployment reveals usability barriers, as DDC-based retrieval demands a level of structural familiarity that contemporary users rarely possess, often requiring the professional mediation of librarians. This challenge underscores the critical importance of investing in intuitive, user-facing interfaces—such as WebDeweySearch—that make hierarchical navigation seamlessly accessible to non-experts, while reaffirming the role of information literacy programs as an indispensable alternative to passive reliance on AI chatbots. Finally, it must be noted that the institutional strengths of the DDC do not emerge in isolation, but rather from its systemic interaction with professionally curated library collections and the robust cataloging environments in which it is traditionally embedded.

Ultimately, the proposal to deploy the DDC as a semantic scaffolding layer within RAG architectures remains speculative. Whether this specific classification scheme constitutes the optimal structure for technical implementation in AI workflows is an open empirical question requiring systematic prototyping, benchmarking, and evaluation. This proposition is advanced here as a

⁷ Integration with Linked Open Data (LOD) is helping, to some extent, to extend its scope to other types of digital resources as well.

programmatic research proposal rather than a finalized empirical result. Given the theoretical and argumentative nature of this position paper, its validity rests upon the logical coherence of its arguments and the integration of current literature. It aims to contribute to a necessary and ongoing dialogue within Library and Information Science (LIS) regarding the enduring relevance of structured knowledge organization in a machine-driven age.

Conclusion

This paper has re-examined the Dewey Decimal Classification not as an obsolete legacy system for physical shelf arrangement, but as a sophisticated, dynamic infrastructure for knowledge organization. Within contemporary library environments, document interpretation, classification operations, and access notations are structurally intertwined. Through its rigorous network of hierarchical notations, scope notes, and cross-references, the DDC reveals an intricate semantic architecture that maps information spaces through explicit conceptual distinctions and disciplinary relationships.

The central finding of this study is therefore not a proposal to transform the DDC into a tool within the computational system, nor is it a claim that classification schemes and information retrieval systems are equivalent. Rather, the proposed analysis suggests that systems such as the DDC represent modes of organising knowledge in which the meaning of each notation is defined through an explicit and historical hierarchical structure, rather than through statistical analysis alone. This mode remains relevant even in a context dominated by search algorithms and GenAI models.

From this perspective, the significance of the DDC extends beyond its traditional role as a bibliographic classification system used for the physical organisation of materials in libraries; rather, it lies in its ability to highlight the processes that remain central to any form of mediation of recorded knowledge: the segmentation and restructuring of the space of meanings, the management of ambiguity, and the interpretation of documents. These operations are bound to reappear in the new digital context as well, albeit often without explicit reflection capable of drawing on the insights gained from 150 years of bibliographic classification history.

At the same time, this work is limited to a theoretical argument developed through conceptual reconstruction and structural analogy. Consequently, the theses put forward here should be understood as heuristic contributions aimed at reaffirming certain fundamental characteristics of knowledge organisation systems.

It is necessary to acknowledge that the DDC remains historically and culturally situated within specific institutional and editorial frameworks. Any contemporary reinterpretation must therefore carefully navigate the risk of abstracting the system from its original operational functions simply to emphasize structural features that align with new computational AI paradigms.

Future research should expand upon these theoretical foundations in several distinct directions. First, a deeper exploration into the epistemological foundations of bibliographic classifications is required to reinforce their structural integrity, ensuring that their core strengths are preserved amid ongoing technological disruptions. Second, empirical investigations should systematically evaluate how the structural properties of the DDC can optimize the design of novel document discovery platforms. Increased awareness of taxonomic benefits should inspire retrieval systems

that, in tandem with advanced AI models, highlight hierarchical relationships rather than generating flat, uncontextualized results. Third, further scholarly attention must be dedicated to the broader epistemological implications of introducing explicit classification constraints into probabilistic and opaque information environments. Finally, the professional community must engage in a rigorous reflection on the role of the human indexer. Document classification is fundamentally an act of intellectual interpretation rather than a mechanical transcription—a vital human mediation that risks being marginalized due to immediate economic pressures rather than structural or epistemological obsolescence.

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Evaluating Retrieval-Augmented Generation for personal collections: architecture, models and criteria*

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ABSTRACT

This article presents an ongoing experiment on the use of Retrieval-Augmented Generation (RAG) architectures in library contexts, considering them not as straightforward extensions of information retrieval techniques but as document mediation devices that require explicit methodological reflection. The contribution focuses in particular on the design and analysis of an integrated evaluation framework, conceived as a structural component of system development rather than as an ex post performance check. Using the personal archive of Emanuele Artom as a case study, characterized by bibliographic and archival heterogeneity, the article examines how the quality of generated responses emerges from the interaction between knowledge base modeling, retrieval strategies and evaluation criteria. The proposed framework combines automatic metrics, LLM-as-a-judge approaches, and human-in-the-loop processes, treating divergences between automated evaluation and expert judgment as diagnostic tools for analyzing system behaviour. Preliminary results indicate that core categories of document mediation, such as relevance, completeness, citability and transparency, cannot be fully reduced to computational parameters but, instead, require continuous negotiation between automated models and disciplinary expertise. From this perspective, RAG is framed as an epistemically unstable research object, whose reliability and governability depend on the robustness and reflexivity of the evaluation processes embedded in its development.

KEYWORDS

Retrieval-Augmented Generation (RAG); Academic Libraries; Digital collection; Personal collection; AI evaluation.

* While the authors worked collaboratively on the text, they specifically focused on the following areas. Angelo La Gorga: Conceptualization, Methodology, Software, Investigation, Data curation, Validation, Formal analysis, Visualization, Writing – original draft. Lorenzo Verna: Conceptualization, Methodology, Software, Validation, Writing – review & editing.

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Introduction

In recent years, artificial intelligence (AI) has assumed a central role in library and information science discourse, not only as a set of technologies aimed at increasing process efficiency, but above all as a catalyst for structural transformations affecting the entire spectrum of documentary mediation. Recent research in the library field highlights how the introduction of AI-based systems can lead to a redefinition of the ways in which information related to the broader domain of cultural heritage is accessed, queried, and interpreted, impacting the very identity of services and opening up the exploration of new models of participatory knowledge production (Roncaglia 2023a). All this takes place in a context in which libraries are increasingly being reconceptualized as sites of knowledge production and validation, rather than solely as spaces for access to and preservation of resources, in line with orientations identified in studies on professional practices and service development strategies (Cox et al. 2018; Cox 2024). In particular, academic libraries emerge as privileged contexts for experimentation, as they are situated at the intersection between the demands of scientific rigor and the need for interpretative mediation, that is, within a space where technology cannot be adopted without simultaneously interrogating its epistemological premises and methodological implications (Tammaro 2024; Harisanty et al. 2025). This framework further fuels the need for a definition of AI that is meaningful for the library domain, one that enables the design of tools that are not only technically effective but also functionally consistent with the documentary and cognitive values and functions of libraries (Cox and Mazumdar 2024). In parallel, programmatic documents such as the *Statement on Libraries and Artificial Intelligence* issued by IFLA emphasize the urgency of adopting a critical approach to the development and use of AI, placing particular emphasis on issues of transparency and traceability of algorithmic decision-making (IFLA 2020; Lana 2023). These concerns intersect with broader cultural and social dynamics, as demonstrated by recent analyses of public perceptions of AI, which highlight the urgency of developing intelligible and verifiable systems that are consistent with the forms of trust governing access to knowledge in institutional contexts (IPSOS 2024). Within this perspective lies the growing interest in the adoption of Retrieval-Augmented Generation (RAG) architectures, in which the generative capabilities of large language models (LLMs) are anchored to bounded and verifiable data sources. Such systems have a particularly significant impact on two critical issues in generalist language models: citation uncertainty and the production of “plausible” but inaccurate content, which are countered by the requirement to use appropriate and reliable sources and metadata (Roncaglia 2024; Gao et al. 2024). For this reason, experimentation with RAG architectures is of particular interest to documentary institutions, where verifiability is not an ancillary technical feature but rather the very condition of the epistemic legitimacy of informational mediation and heritage narration. The architecture discussed in this article emerges within this research horizon and is developed as part of a PhD project funded by the PNRR (Next Generation EU), embedded within the *Technologies for Cultural Heritage* (T4C) program at the University of Turin. It is also situated within the PRIN project *NEREIDE – New Reading Experiences in Digital Ecosystems* (2022–2025),¹ and aims to experiment with innovative forms of

¹ The NEREIDE project (*NEw Reading Experiences In the Digital Ecosystem*) aims to investigate new reading practices and habits related to the evolution of the digital ecosystem. The project does not focus exclusively or primarily on “digital

digital enhancement of the Historical Library “Arturo Graf” of the University of Turin, while investigating how RAG can contribute to the construction of interpretative pathways grounded in complex and non-homogeneous corpora. This alternative model for representing the informational content of different types of bibliographic and documentary resources neither replaces nor modifies the formal standards of archival or bibliographic representation, which remain fully operative and distinct within their respective disciplinary domains. Rather, it is positioned at a meta-bibliographic and meta-documentary level, in the sense that it makes ex post use of vertical representation models that conform to principles, models and standards that are normalized and validated through practice, without interfering with the internal structure of the original descriptions. Within this framework, the “meta” level should be understood in an operational rather than hierarchical sense: not as a superstructure that subsumes or supersedes existing bibliographic and documentary systems but as an integrative mediation space that enables different modes of interaction. Within this “meta” level, the model thus makes it possible to establish horizontal and transversal relationships of narrative connection among heterogeneous bibliographic and documentary data, preserving the autonomy of individual descriptive systems while fostering dialogue along a functional and communicative axis. In metaphorical terms, the overall architecture can be described as a space in which *the architect and the oracle* are called upon to engage in operational dialogue, echoing the image proposed by Roncaglia, who identifies the tension between formal design and interpretative questioning as one of the defining elements of cultural systems mediated by artificial intelligence (Roncaglia 2023b). By analogy, this approach resonates with reflections on metacataloguing as a space for descriptive integration between different disciplinary traditions, as outlined by Valacchi, while remaining situated on a distinct plane and pursuing different objectives (Valacchi 2022). While metacataloguing aims at a possible synthesis of domain-specific languages, the model proposed here is instead configured as a device for narrative and analytical mediation, oriented toward supporting exploratory and interpretative research processes, without calling into question the solidity or centrality of the underlying descriptive systems. At this stage, the architecture is analyzed not in relation to user interface development, which will be the subject of subsequent reflections, but rather as a cognitive and technological infrastructure whose functioning must be critically assessed before mediation toward users can take place. The choice of the personal collection of Emanuele Artom, preserved in heterogeneous forms and distributed across institutions such as the Historical Library “Arturo Graf,” the CDEC Foundation, the Historical Archive of the University of Turin, the National Museum of the Risorgimento, and the ISTORE-TO,² directly responds to this need: to test the ability of RAG systems to operate on materials that, by their very nature, require interpretation, recomposition and historical contextualization, in line with the *Linee guida sul trattamento dei fondi personali* (AIB 2019). In this sense, the research situates itself within the evolving role of academic libraries in the Third Mission, where the digital enhancement of heritage no longer coincides with accessibility, but rather with the construction of interpretative competencies and publicly oriented narrative processes (Sabba 2019; Cassella 2020).

reading” (i.e., reading on digital devices), but rather on the interaction between different reading practices (both on paper and on screen) and their social, cultural, and informational contexts. <https://filosofiacomunicazionepettacolo.uniroma3.it/ricerca/progetti-di-ricerca/prin/>

² For a detailed overview of the distribution of documentary resources and their census, see Marzal et al. (2025).

To evaluate this architecture, the article proposes an analytical model that combines automatic metrics and expert judgment, acknowledging the interpretative nature of documentary relevance as extensively discussed in information retrieval theory (Voorhees 2000).

The article therefore develops along a trajectory that reflects the progressive construction of the entire system. First, it outlines the process of building the knowledge base related to the Artom collection, highlighting the implications that the heterogeneous nature of the sources entails for a semantic retrieval model. It then presents the adopted RAG architecture, analyzing its technical components and the ways in which they enable the transformation of bibliographic and documentary data into verifiable narrative material. A third section is devoted to defining the evaluation model, conceived not as a final or external phase of development, but as an integrated, design-oriented and methodological component necessary to govern system behaviour. Finally, the analysis of preliminary results from automated evaluation and expert assessment aims to demonstrate how the dialogue between metrics and human judgment constitutes a crucial step for platform tuning and, more broadly, for validating its narrative potential when applied to personal archives and collections.

Knowledge base modelling

The construction of the knowledge base (KB) intended for the RAG platform is oriented toward the creation of an experimental representation of documentary information, conceived to support transversal narrative and thematic paths. While keeping the original bibliographic and archival descriptions fully intact and autonomous within their respective domains, the KB is therefore configured as a parallel view: not descriptive but relational and narrative. In a RAG environment, the primary unit of interrogation does not coincide with the representation, even if relational, of the individual document, but rather with “meanings”, understood as configurations or paths of sense that an LLM can infer and articulate when it is fed with content originating from authoritative and controlled documentary domains, without altering them. From the initial phase, it was necessary to define an internal classification system in order to clearly distinguish the different categories of bibliographic and documentary resources, according to their relationship with the subject of the collection:

1. the books of the Artom bibliographic collection, derived from the inventory of the Historical Library “Arturo Graf”;³
2. the documents originating from the CDEC archival collection, selected for biographical and contextual relevance;⁴
3. the works written by Emanuele Artom, including diaries and other texts published or recovered in digital format;
4. the works on Artom, including historical, commemorative and critical contributions.

³ The descriptions of the individual copies, prepared by Elena Prandi for her master’s thesis, are currently accessible through the University catalogue (Prandi 2014) .

⁴ The documents of the collection and their descriptions are fully available on the CDEC Digital Library website: <https://digital-library.cdec.it/cdec-opac/>.

This simple subdivision does not have the function of an actual bibliographic or archival taxonomy but makes it possible to integrate heterogeneous materials within a single interrogable architecture, while at the same time maintaining the conceptual distinction between models of representation of different nature. The bibliographic segment is by far the most extensive: the Artom collection consists of 823 volumes, each of which has been described on the basis of metadata extracted from the University catalogue and normalized within the KB. With regard to the textual dimension, the digitized volumes, except for those by and about Artom, were processed through a procedure of thematic incremental summarization,⁵ allowing the treatment of even very extensive volumes. The need to reduce informational noise, while at the same time preserving the relevant conceptual structures of each work, is confirmed by contemporary studies on the treatment of long documents in retrieval-augmented systems. Recent research such as *BooookScore* (Chang et al. 2024) shows how the combination of chunking⁶ and the production of incremental summaries is an effective strategy for making complex monographic texts interrogable, preserving thematic coherence and reducing semantic ambiguity. The form of the result is analogous to that observable in Appendix A, where the summary of the novel *La capanna dello zio Tom* shows the type of output obtained: a thematically organized reformulation, capable of reducing informational noise and of making explicit the salient conceptual cores of the work. The works written by Artom and those about him were instead integrated into the KB in their entire textual form. Their integrity is considered indispensable for the reconstruction of the intellectual and political biography of the author and for the analysis of the processes of reception of his figure. The digitized texts were retrieved through authoritative digital sources, in particular from the *Turin Public Domain* project on Internet Archive, and described according to current bibliographic standards, so as to ensure formal coherence with the bibliographic segment of the Artom collection. In this case, the modelling intervention focuses on the integration structure, not on the contents, which are preserved in their entirety.

With regard to the selection of materials originating from the CDEC archival collection, several documentary units directly relevant to the biographical and narrative purposes of the experimentation were identified. In particular, the following were included: *Ultime volontà* (*Last will*), *Note Storiche* (*Historical notes*), *Certificato di morte* (*Death certificate*), the documentation of the *Dal Dosso–Malanga–Peccolo Besso* trial, and a selection of the correspondence of Amalia Segre Artom, mainly relating to the years following her son's death. For these units, beyond the textual content, only the titles and the narrative descriptions provided by the archival domain were retained. This alternative view, devoid of descriptive and normative ambitions, is intended to make these materials integrable within the narrative paths of the KB, where what is brought into relation are not archival or bibliographic structures, but the informational contents of the documents and

⁵ In the context of this contribution, *incremental summarization* refers to the procedure adopted for processing extended texts intended for the retrieval base of the RAG architecture. This procedure is based on the decomposition of content into coherent units, the production of partial summaries, and their subsequent aggregated reworking, aimed at reducing informational noise while preserving relevant thematic and semantic structures. For a detailed discussion of the procedure and its methodological implications, see La Gorga et al. (2025).

⁶ A content segmentation technique consisting in dividing an extended text into smaller, semantically coherent units (chunks) that can be managed individually. In the context of information systems and AI, chunking facilitates indexing, targeted information retrieval, and automated text processing.

their function in reconstructing the socio-cultural context in which the author operated. Overall, the constructed KB takes the form of a representational model aimed at the enhancement of the personal archive and collection through the preparation of thematic, conceptual and narrative paths, and is therefore not attributable to the classical functions of information retrieval, which nevertheless remain fully available through traditional documentary mediation tools. Its purpose is not to identify or describe documents according to traditional library or archival criteria but to enable interrogations that traverse the materials in order to recompose the cultural and biographical fabric of Emanuele Artom.

From a technical point of view, the KB is hosted in PostgreSQL⁷ and articulated into two complementary components. On the one hand, the *pgvector* extension allows for the management of semantic embeddings and thus vector-based querying, based on the textual chunks that constitute the primary unit of semantic retrieval. On the other hand, the SQL database preserves bibliographic metadata associated with each document in normalized form. The adopted architecture, with a relational database for metadata and a vector database for semantic embeddings, reflects contemporary practices for integrated knowledge bases. Studies such as CHASE (Ma et al. 2025) demonstrate that it is technically possible to perform hybrid queries on structured and unstructured data, optimizing both semantic accuracy and query efficiency. Other recent models for multimodal data (Chandra et al. 2025) confirm that the coexistence of vector similarity and relational queries represents a robust approach suited to complex and stratified collections. Moreover, open-source tools such as PostgreSQL with vector extensions practically demonstrate how to integrate keyword search, metadata filtering, and semantic search within a single infrastructure. This paradigm therefore offers the dual advantage of preserving traditional descriptive structures, necessary for queries compliant with bibliographic and archival models and enabling exploratory research across texts and contents.

The architecture: Retrieval and Generation

The introduction of a RAG architecture within the context of this project does not imply a revision of consolidated practices of bibliographic and documentary mediation, nor does it call into question the role of tools traditionally devoted to the description, organization and access to resources. Catalogues, discovery systems and informational apparatuses, based on formalized descriptive models, continue to constitute the primary infrastructure through which bibliographic and documentary heritage is made accessible and interrogable according to the principles of the library and archival tradition. Within this perspective, the RAG environment is configured as an additional experimental layer, designed to complement these tools and to expand modes of mediation without replacing them. The developed platform provides a prototype that allows users to access the contents of the KB through interaction in natural language. This mode of access is not conceived as a new form of bibliographic search, nor as an alternative to structured querying mechanisms, but rather as a space for guided exploration of the constituted collection. The use of

⁷ PostgreSQL is an open-source relational database management system, widely used for the storage and structured management of complex data in research applications and information services.

natural language makes it possible to formulate discursive requests and to obtain responses constructed from controlled selections of the corpus, fostering a form of engagement oriented toward understanding and contextualization of information. It is at this level that a distinction becomes necessary with respect to information retrieval processes as defined in current conceptual models of bibliographic and documentary description. The querying procedures activated in the RAG environment do not aim at the retrieval of bibliographic entities nor at the return of records, but at the elaboration of responses that treat heritage as a structured set of texts and metadata, brought into relation according to specific informational requests. In coherence with this approach, the role of metadata is also interpreted in an extended sense. While retaining their descriptive and identifying functions, they are integrated into a representation model that enhances their informational potential in relation to the textual content and semantic connections expressed in the KB. This results in modes of access and retrieval oriented toward thematic and contextual dimensions, enabling an information output consistent with the interpretative and enhancement purposes of a personal archive or collection. The described configuration should therefore be understood as a proposal still in the process of definition, oriented toward exploring in a controlled manner the possibilities offered by the integration of documentary representation models and systems of automatic language generation. The architecture was designed as an experimental environment, in which modes of access to content, the role of metadata and the logics of source selection can be observed, evaluated and progressively refined. Within this perspective, attention is focused less on the stability of the technical solution and more on the possibility of testing a methodological framework that, as will be discussed below, finds in the retrieval phase the open challenge to be addressed regarding the stability of RAG architectures (Huang and Huang 2024). It is in this phase, in fact, that the portion of bibliographic and documentary heritage that will actually be made available to generation is determined, thus conditioning informational quality, argumentative correctness and the enabling of citations. This process assumes not only technical but also epistemic relevance, constituting the core of the attempt to respond to critical issues such as limited reliability of responses and opacity of sources, well-known and extensively studied limitations of LLMs (Ji et al. 2023) and considered obstacles to their use in documentary mediation processes (Roncaglia 2023a). The platform architecture, articulated across three layers, React frontend, FastAPI backend, and PostgreSQL database extended with *pgvector*, integrates retrieval and generation within a single curatorial logic, as described in the project documentation.⁸ The *SmartAgent*⁹ interprets the user's query and decides whether to activate documentary retrieval through the two available tools: *retrieve_knowledge* for semantic querying of contents and *query_collection_metadata* for structured extraction of bibliographic and collection metadata. Semantic retrieval is based on a vector engine implemented with *pgvector* and on the *text-embedding-3-small* embeddings, which project both queries and previously segmented documents into a distributional space. Segmentation into chunks of approximately 1000 tokens with an overlap of 100 tokens makes it pos-

⁸ <https://github.com/EArtomRag/biblio-rag>

⁹ *SmartAgent* is the designation adopted in this work to indicate a software component designed to operate as an agent within the system. The term refers to the notion of *agent* in the classical artificial intelligence literature, understood as an entity capable of perceiving information from the environment and executing actions oriented toward the achievement of specific goals (Russell and Norvig 2022).

sible to maintain contextual coherence across segmentation thresholds, reducing informational dispersion, which is a known risk of text-splitting operations. During querying, the vectorized query is matched with the most relevant chunks via cosine similarity,¹⁰ according to an approach that is by now well established in the literature on semantic search (Reimers and Gurevych 2019; Karpukhin et al. 2020). In the standard configuration, up to ten chunks are selected, subsequently filtered by similarity and enriched with their respective metadata. The *query_collection_metadata* function extends this mechanism to the domain of structured data, allowing the *SmartAgent* to construct read-only SQL queries in order to respond to questions concerning the composition of the collection: counts, lists, chronological distributions, and other operations typical of bibliographic descriptive statistics. The operational flow unfolds according to a sequence that, while technically defined, reflects a precise methodological intention. The *SmartAgent* first classifies the input, distinguishing simple conversational exchanges from requests grounded in the contents of the collection. Only in the latter case the retrieval tools are activated: the query is transformed into an embedding, sent to the vector database and mapped back to a set of relevant chunks. These fragments, accompanied by their metadata, constitute the documentary context that will be transmitted to the generative model, together with a structured system of citations that allows users to verify precisely the sources employed. Every response that involves the use of the KB must include explicit references to the consulted documents, presented to the user as numbered citations and accompanied by a sources panel that makes it possible to trace back to metadata and, where available, to the textual passages used. The integration of a system of *guardrails*¹¹ further contributes to preventing the emergence of content unsupported by the corpus, mitigating the risk of hallucinations and constraining the production of outputs not compliant with the reference domain. The generation phase constitutes the final step of the RAG pipeline and, in the platform dedicated to the Artom collection, does not merely consist of a linguistic transformation of retrieved information. The agent is modelled as a genuine curatorial figure: a rigorous digital mediator, capable of combining expository clarity and accuracy with a tone described as “*scholarly but warm and engaging*”, designed to promote accessibility for diverse audiences. The construction of its communicative identity, a coherent set of style and expressive rules defined through an extended system prompt, responds to emerging practices of persona design in conversational systems, which show how the definition of a role and a personality contributes to orienting interaction quality and reliability (Pradhan and Lazar 2021). Generation is governed by the *Prompt Builder* (*builder.py*) and by the *Smart Engine*, which dynamically constructs the sequence of messages addressed to the model. When a response requires the use of documents, retrieved chunks are inserted as tool

¹⁰ Cosine similarity is a measure used to quantify the degree of similarity between two vectors in a multidimensional space. It is defined as the cosine of the angle between the vectors: the smaller the angle, the greater the similarity. The resulting value ranges between -1 and 1 (or more commonly between 0 and 1 when vectors are non-negative, as in the case of textual embeddings): values close to 1 indicate strong semantic proximity, while values close to 0 indicate the absence of a relationship. This method is widely used in distributed representations of knowledge to compare words, sentences, documents, or other cultural objects modelled through embeddings, as it captures similarity based on co-occurrence patterns or contextual relationships learned by language models.

¹¹ *Guardrails* are mechanisms external to the language model that filter, constrain, or correct inputs and outputs with the aim of ensuring safety, relevance, and reliability of responses, preventing undesired behaviours or outputs not compliant with the application domain (Bassani and Sanchez 2024).

messages, accompanied by the source category and metadata. This allows the model to operate within a structured and fully attributable context, reproducing in computational form the professional principle according to which a response must be accurate and grounded in verifiable sources, a criterion recognized in international standards for reference evaluation, from *IFLA Measuring Quality* (Poll 2007) to the information quality indicators included in the most recent versions of the ISO 11620:2023 standard (ISO 2023).

The evaluation framework

The development of a dedicated evaluation framework¹² constitutes one of the most methodologically significant elements of the project. This choice is situated within the broader debate on the evaluation of generative AI in documentary and bibliographic systems, a domain in which controlling informational quality and faithfulness to sources is considered indispensable in order to mitigate distortions and phenomena of algorithmic opacity (Sullutrone et al. 2024). The iterative nature of the evaluation adopted in this framework aligns with an orientation that is by now well established, emerging both from empirical analyses of the behaviour of generative models and from theoretical reflection on their use in complex contexts. Practices of cyclic examination of outputs, with subsequent revisions and renewed interaction, show how output quality requires continuous and structured verification (Natale et al. 2025). In parallel, studies on the dynamics of collaboration between humans and language models describe these systems as tools whose effective functioning depends on recursive processes of evaluation and interpretative refinement (Raisch and Fomina 2025). At a more general level, recent investigations on LLM evaluation highlight the limits of static benchmarks and point to the need for continuous, adaptive evaluative approaches rooted in the real tasks models are expected to address, emphasizing that retrieval and generation metrics must be considered jointly in order to capture the actual behaviour of such hybrid architectures (Yu et al. 2025). The objective of evaluation is not only to measure system accuracy but to understand how a generative model interacts with complex bibliographic and documentary information, testing not only the produced results but also the cognitive operations implicitly involved in their generation. From an operational standpoint, the framework is implemented as an application that orchestrates, in a structured manner, all phases of evaluation. Execution is started via the *run* command, based on a configuration suite that specifies the dataset, the RAG system to query and the set of metrics to be computed. A data-loading module reads a .jsonl file in which each line represents either a single query or a multi-turn conversation;¹³ for each of them, the application queries the RAG platform through a language model that simulates user behaviour, thus obtaining the system-generated response and allowing it to be evaluated under the same conditions as a real interaction. For each question–answer pair, a metrics manager then operates, applying in a coordinated way the different families of measurements included in the

¹² <https://github.com/EArtomRag/rag-evaluation-framework>

¹³ An interaction composed of multiple consecutive exchanges between user and model, in which each turn depends on the preceding ones. Unlike a single isolated query, a multi-turn dialogue evaluates the system's ability to maintain context, correctly interpret subsequent questions, manage anaphoric references (e.g., pronouns and synonyms), and ensure discursive coherence across the entire sequence.

framework: retrieval metrics (recall@k, mrr, ndcg@k), which assess the system's ability to rank relevant documents in the top positions, LLM-based RAG quality metrics (faithfulness, answer_relevancy, contextual_precision, contextual_recall) and a core set of operational metrics, such as cost and latency, which document the computational impact of different configurations. Within the second family fall the practices known as *LLM-as-a-judge*, today widely discussed in the literature on generative AI evaluation for their ability to provide judgments that are consistent and often well correlated with human ones (Gao et al. 2025). In this approach, a language model trained or instructed to act as an evaluator, analyzes the system's response, assigns a score according to the specified metric and, when required, provides a textual rationale for its judgment. Recent studies have shown that such evaluators can offer a reliable estimate of the semantic and contextual quality of responses, provided they are employed within adequately controlled evaluation pipelines (Huang et al. 2025). The results generated at this stage, including the system response, retrieved documents, metric scores and, where applicable, the explanations produced by the evaluator LLM, are then saved in structured form so that they can subsequently be analyzed both automatically and within the human review process. A reporting module produces a set of human-readable outputs: an interactive HTML report that displays responses and metrics in tabular form and CSV and JSON files that summarize aggregated results. It is from these artefacts that the *human-in-the-loop* (HIL)¹⁴ procedure is activated: through dedicated commands, the framework exports results to a CSV for human review and, once the evaluation columns have been completed by the involved experts, it analyzes the degree of alignment between manual judgments and those generated by the model, highlighting the cases of greatest disagreement and thereby providing systematic support for critical reflection on automatic metrics. A qualifying characteristic of the framework is, therefore, its hybrid nature: evaluations are conducted via *LLM-as-a-judge* practices, recognized as effective tools for providing scalable and consistent judgments but requiring expert supervision, and are systematically integrated with a *human-in-the-loop* process that ensures interpretative control (Amirizani et al. 2024). The system produces an initial judgment, while final validation is entrusted to a structured human intervention, activated in problematic cases or when the contextual, biographical, or bibliographic dimension requires specialized expertise. The human contribution is not limited to verifying the factual correctness of responses, but includes the assessment of narrative coherence, alignment with descriptive and bibliographic practices, and the contextual robustness of the interpretations provided. The figures involved in the HIL process play distinct and complementary roles. For the biographical dimension, the construction of questions related to documentation on the diaries and the verification of the system's responses in the most delicate cases are conducted in collaboration with Guri Schwartz, Associate Professor of Contemporary History at the University of Genoa and curator of the critical edition of Artom's diary texts, in order to ensure precise philological and historical control over generated reconstructions. For the bibliographic dimension, the definition of questions aimed at testing the platform's ability to transform a user prompt into SQL queries over the

¹⁴ *Human-in-the-loop* (HIL): an evaluation or control strategy in which humans intervene at key points in the process to verify, correct, or validate the results generated by the automated system. In the context of LLM evaluation, the expert's role consists in reviewing the judgments produced by the model, identifying interpretative or contextual errors, and providing a final validation that cannot be reduced to automated measurement alone.

database and to return formally correct representations of bibliographic information is carried out in dialogue with Maurizio Vivarelli, former Full Professor of Bibliography and Library Science at the University of Turin, who also contributes to validating the corresponding answers, verifying their coherence with bibliographic representation models. The *human-in-the-loop* thus operates at two decisive moments: in defining the benchmark and in verifying the judgments produced by the model-as-judge, ensuring an interpretative control that is indispensable in the most complex cases and keeping evaluation anchored to recognized disciplinary criteria. The construction of the benchmark of questions, the so-called golden standard, represents a central step of the framework. Unlike generic benchmarks used in AI, the one developed for this project is conceived as an epistemic device calibrated to the specificities of the Emanuele Artom collection, to actual research practices and to the cognitive operations that a documentary enhancement system is expected to support. The included question categories (factual, synthesis, comparison, SQL, bibliographic and out-of-scope) integrate three perspectives: the effective research practices on the Artom collection, the operations that a RAG system can concretely perform and models elaborated in the literature on semantic retrieval regarding the construction of evaluative scenarios. Each benchmark entry is defined in JSONL format and includes the question, the category, a manually drafted gold answer and a set of reference documents considered primary for generating the response. The construction of the golden standard is an interpretative work, grounded in the awareness that, in complex documentary contexts, a perfect answer does not exist: response evaluation is always situated and negotiated and what matters is not the uniqueness of the result but its justifiability with respect to the sources and the adopted relevance criteria. As shown both by the consolidated tradition of studies on informational relevance, which describe relevance judgment as an intrinsically variable, multidimensional, and context-dependent process (Barry and Schamber 1998; Saracevic 2007) and by more recent analyses that highlight the interpretative plurality of possible answers in retrieval and generation systems (Peikos and Pasi 2024), what can be asked of a gold standard is not the production of a definitive truth but the formulation of grounded and coherent answers with respect to the reference context. The framework does not only produce measurements but constitutes the engine of continuous platform improvement in which errors are classified as retrieval, generation or evaluation and then this taxonomy feeds iterative cycles of system revision. Evaluation outcomes thus guide prompt reformulation, optimization of search parameters, enrichment of the conceptual schema and, when necessary, redefinition of the benchmark categories themselves. The quantitative and qualitative results returned by automatic metrics and by comparison with human evaluation are not treated as definitive outcomes but as diagnostic elements that make it possible to interrogate system behaviour and to iteratively orient design decisions. The application of the architecture to a heterogeneous and stratified documentary corpus such as the Emanuele Artom collection makes this orientation particularly evident. In a context of such complexity, no single metric is able to exhaustively capture system functioning. Dimensions such as the accuracy and completeness of responses, their anchoring to sources and their adequacy with respect to the required cognitive operations emerge only if evaluative results are interpreted at a sufficiently granular level. For this reason, attention here is not placed on aggregated scores but on individual queries, considered as analytical units through which to observe the interaction between retrieval, generation and evaluation. It is at this step that the systematic comparison between automatic metrics and expert human judgment assumes a central role. Metrics provide

scalable and reproducible indicators, useful for identifying trends and recurring behaviours but tend to privilege formal aspects of coherence and semantic alignment. Human evaluation, instead, makes it possible to interpret these indicators in light of the cognitive operations required by the questions and the criteria specific to bibliographic and documentary mediation, making visible gaps and ambiguities that would otherwise remain opaque. It is precisely from the interaction between these two levels of observation that behavioural patterns attributable to specific architecture configurations emerge. The examples discussed here, collected in the table in Figure 1, are read, from this perspective, as diagnostic cases and therefore not as resolved problems or demonstrations of consolidated solutions but as situations from which concrete lines of work are being explored. The tuning hypotheses currently under exploration focus in particular on recalibrating retrieval strategies according to question types and on strengthening the recognition of complex documentary and bibliographic entities, alongside interventions on generation prompts and experimentation with evaluative criteria that are more sensitive to phenomena of incompleteness and to the explicit handling of not-knowing.

Tipo di domanda	Domanda	Risposta dell'LLM	Valutazione LLM-as-a-judge	Esito valutazione umana (Likert)
synthesis	Che cosa rivela la composizione della biblioteca di Artom riguardo ai suoi interessi intellettuali?	La composizione della biblioteca di Emanuele Artom riflette un interesse profondo per la storia antica, la cultura ebraica e la storia locale, in particolare valdostana. Laureato in lettere e studioso di storia, Artom orientò i suoi studi verso ambiti che coniugano ricerca storica e impegno civile. L'epigrafe posta nella biblioteca sottolinea come egli "alimentò dell'esperienza antica la sua speranza in una libera patria", suggerendo una connessione tra conoscenza del passato e ideali di libertà.	Faithfulness: 1.0 Answer relevancy: 1.0	Faithfulness: 3 - Parzialmente adeguata Answer relevancy: 4 - Adeguata
factual	Chi erano i membri della famiglia di Emanuele Artom?	Emanuele Artom era figlio di Emilio Artom e aveva un fratello di nome Ennio Artom. Il padre Emilio si sposò nel 1914 con la donna che sarebbe stata la madre di Emanuele. Emanuele nacque il 23 giugno 1915, mentre Ennio nacque il 25 aprile 1920 e morì il 29 luglio 1940. Non risultano menzionati altri fratelli o sorelle nelle fonti consultate.	Faithfulness: 1.0 Answer relevancy: ~0.56	Faithfulness: 3 - Parzialmente adeguata Answer relevancy: 3 - Parzialmente adeguata
comparison	Come varia la rappresentazione di Artom come intellettuale rispetto a quella come partigiano nelle diverse lettere di commemorazione?	Le commemorazioni intrecciano la figura di Artom come studioso e come partigiano. Da un lato viene ricordato come intellettuale raffinato, laureato in Lettere e studioso di storia e cultura ebraica; dall'altro come combattente della Resistenza, commissario politico del Partito d'Azione, esempio di coraggio e coerenza morale. Le due dimensioni non sono contrapposte, ma presentate come complementari: la cultura alimenta l'impegno civile e l'esperienza partigiana conferisce valore esemplare alla figura dello studioso.	Faithfulness: 1.0 Answer relevancy: 1.0	Faithfulness: 5 - Pienamente adeguata Answer relevancy: 4 - Adeguata
out_of_scope	Quale fu il primo libro che Artom lesse da bambino?	Dai documenti attualmente disponibili nella collezione, non emerge un riferimento esplicito al primo libro che Emanuele Artom lesse da bambino. Nei testi biografici e nei suoi scritti sono presenti descrizioni della sua infanzia e del suo carattere precoce, ma non viene menzionato il titolo del primo libro letto.	Faithfulness: 1.0 Answer relevancy: 0.5	Faithfulness: 5 - Pienamente adeguata Answer relevancy: 5 - Pienamente adeguata

Figure 1. The table reports examples of the evaluation outcome for some questions.

When a question requires a synthesis operation based on the composition of Emanuele Artom's personal library, system behaviour highlights some significant tensions. The response generated by the system appears, on first reading, solid and well constructed: the *LLM-as-a-judge* assigns it maximum scores for the analyzed metrics, on the basis of full coherence with retrieved contexts. It is the human judgment that makes visible a gap that automatic metrics alone do not capture with the same clarity. While recognizing the overall plausibility of the response and the correctness of the recalled information, the human reviewer assesses faithfulness as only partially adequate and answer relevancy as adequate but not fully centered. The critical point does not concern what is asserted but rather the argumentative path through which the response is built. The analysis of Artom's intellectual interests is in fact based primarily on a biographical and symbolic reconstruction (the education, scholarly activity, the value of the commemorative epigraph) whereas the ques-

tion presupposes a different kind of synthesis operation, grounded in the composition of the collection, in the works actually present and in the represented disciplinary areas. In the corpus, such information is available, also in the form of thematic summaries produced during knowledge base modelling but it is not activated with priority, thus leaving space for a generation phase that tends to compensate for this gap through highly plausible narrative inferences. This case made visible a structural tension between discursive coherence and documentary anchoring, orienting a set of intervention hypotheses that are currently being explored. In particular, work is underway on the possibility of strengthening the recognition of the library as an autonomous documentary entity within the knowledge base, emphasizing its distinction from biographical and paratextual materials. In parallel, differentiated retrieval strategies are being tested according to question type, with the aim of privileging, for queries of this kind, descriptive documents about the works and thematic summaries. On the generation side, this example also suggested the need to refine prompts in order to make the required level of analysis more explicit and to constrain recourse to inferences not directly supported by activated sources. The objective is not to limit the model's interpretative capacity but to orient it in a more controlled way, making recognizable the distinction between what is deduced from the documentary composition of the collection and what instead derives from a more general reconstruction of the subject's profile. The gap between automatic evaluation and human evaluation thus assumes an operational value, since it makes visible a system configuration that requires a targeted refinement of the architecture. If in the previous case the criticality emerged from an excess of narrative inference, the analysis of a factual question makes it possible to observe a different tension, related to the handling of informational completeness. When asked to identify members of Emanuele Artom's family, the system returns a response that, at the formal level, appears correct and coherent with activated contexts. The *LLM-as-a-judge* assigns a maximum score to faithfulness, recognizing the absence of explicit contradictions, while penalizing answer relevancy due to the presence of accessory information not strictly necessary with respect to the question. Human evaluation operates instead on a different level, shifting attention from the formal coherence of the response to its overall informational coverage. While detecting no factual errors, the reviewer assigns both faithfulness and answer relevancy a judgment that is only partially adequate, highlighting a lack of exhaustiveness with respect to the information actually available in the corpus, particularly in relation to the omission of Artom's mother, Amalia, who is extensively documented in the collection. From a documentary perspective, this case highlights a critical passage already glimpsed in the first example but articulated differently: a retrieval limit is not made explicit but is instead absorbed into the response in the form of an epistemic conclusion. The response asserts nothing false but produces an effect of completeness that does not reflect the real state of information available in the corpus. This type of behaviour escapes metrics oriented toward detecting contradictions such as faithfulness but emerges clearly in human evaluation, which is more sensitive to the requirements of exhaustiveness that characterize factual questions. In continuity with the previous case but shifting the axis from inference to coverage, this example shows how the quality of factual responses depends not only on formal correctness but on the system's ability to represent transparently what it knows and what, at that moment, it is not able to reconstruct. Comparison between automatic evaluation and human judgment makes this tension observable and traces it back to a system configuration that requires a targeted intervention on retrieval. The analysis of the next case makes it possible to

observe a different situation, showing a strong alignment between automatic evaluation and human judgment. The request to compare the representation of Emanuele Artom as an intellectual and as a partisan in commemorative letters triggers a response that the *LLM-as-a-judge* evaluates as fully adequate. The reviewer confirms the result, recognizing in the response a high degree of documentary anchoring, made explicit by the citation system that directly refers to retrieved contexts, and a correct interpretation of the cognitive operation required by the question. The comparison between the two dimensions of Artom's figure is not resolved into a schematic opposition but returns the intertwining of cultural formation and political action that characterizes commemorative sources. The observed alignment depends on the comparative strategy adopted in the response, which privileges a thematic synthesis rather than a point-by-point comparison document by document. Human evaluation recognizes this choice as legitimate and coherent with the question, but implicitly lets a margin of interpretative ambiguity emerge: the request for "variation" could also be read as prompting a more analytical comparison between individual letters, in addition to a transversal synthesis. Precisely for this reason, the case assumes a relevant methodological function, offering a reference point for calibrating system behaviour in the presence of complex comparative operations. On the one hand, it confirms that current retrieval and generation strategies are able to support articulated comparisons when relevant documents are correctly activated and the level of synthesis is adequate; on the other, it is orienting reflection on how to make the adopted comparative strategy more explicit at the generation stage. In this sense, alignment between automatic evaluation and human judgment does not represent an endpoint but a tool for verifying the overall coherence of the architecture and a basis for experimenting with controlled refinements. System behaviour can also be observed in the presence of questions that fall outside the informational domain of the corpus, as in the case of the request to identify the first book read by Emanuele Artom as a child. In this situation, the generated response does not attempt to fill the informational gap through inferences or conjectures but explicitly declares the absence of the datum in the available documents, distinguishing between what is attested in the corpus and what does not appear documented. Automatic metrics return a differentiated outcome, with high faithfulness scores and a penalization of answer relevancy, linked to the absence of a positive informational content. In a purely extractive reading, relevance is thus associated with the ability to provide positive content, regardless of the nature of the question. Human evaluation interprets the same behaviour in light of different criteria, linked to the documentary nature of the question, judging relevance as fully adequate as well, showing how, in the presence of an out-of-domain question, the most correct response consists in the transparent communication of the system's knowledge limit. From the human reviewer's standpoint, the response is relevant precisely because it informs the user about the boundaries of the corpus and the documentary nature of the available information, avoiding the introduction of speculative elements that would compromise the system's overall reliability. This example makes particularly evident a conceptual gap between certain automatic metrics and human evaluative criteria. Metrics such as answer relevancy, if interpreted in a non-contextualized way, can penalize negative answers or answers that explicitly state the absence of information, even when such answers represent the epistemically most appropriate behaviour. Comparison with human evaluation instead makes it possible to reformulate the very meaning of relevance according to question type, including the system's ability to recognize and make explicit its own limits as a positive indicator of quality. This case

does not highlight a criticality of the RAG architecture in the strict sense but rather a configuration in which system behaviour is epistemically adequate, while putting into tension the criteria through which such behaviour is evaluated. The interest of the example therefore lies in the possibility of interrogating not only generation strategies, but also the functioning of the metrics themselves and, more generally, of the evaluation process. In this perspective, ways are being explored to refine automatic metrics, distinguishing more explicitly between incomplete answers and correctly out of scope answers, for example through dedicated labels or evaluative criteria differentiated according to question type. The case thus shows how the refinement of the RAG architecture and that of the evaluation framework proceed in an interdependent way: it is not only the system that is evaluated, but the evaluative process itself that is continuously recalibrated in light of observed behaviours, making explicit the complementary nature of the two levels.

Conclusions

The work presented describes an ongoing experimentation process aimed at prototyping a Retrieval-Augmented Generation architecture in the library domain. At this stage, the objective is to explore, through a circumscribed and controlled case study, the methodological conditions that make it possible to meaningfully observe the behaviour of a generative system applied to a complex bibliographic and documentary heritage. The adoption of RAG is assumed from the outset as a problem of informational and communicative mediation, rather than as an extension of information retrieval models and techniques. This entails a shift in focus from the apparent quality of answers to the relationship they establish with sources, representational structures and the cognitive operations implicit in the questions. The construction of the knowledge base, the design of retrieval and the configuration of generation are not treated as independent components but as elements of a single methodological space, in which each design choice shapes the kind of knowledge the system is able to produce and make intelligible. The main contribution of the research, therefore, lies in the way evaluation is integrated into the development process itself, operating not as an *ex post* verification but as an analytical instrument that makes the system's structural tensions visible. The systematic comparison between automatic metrics and human judgment is not intended to determine which of the two approaches is more reliable but to use their misalignment as an interpretative key for understanding the architecture's behaviour and guiding its refinement. What emerges is an idea of RAG as an intrinsically unstable experimental environment, whose functioning cannot be adequately described through aggregated scores or generic benchmarks. The relevance of individual answers depends on the type of documentary operation elicited, the role assigned to sources and the system's ability to make explicit what is effectively supported by the available documents. Non-answers or explicitly limited answers thus also assume a positive epistemic value, challenging evaluation metrics that may tend to identify quality with the presence of explicit informational content. The architecture therefore appears less as a tool to be "applied" to libraries and more as a research object that enables reflection on consolidated categories of documentary mediation (relevance, exhaustiveness, citability, transparency) and, in particular, on their epistemological and technical articulation in the context of interaction with generative AI. The Artom collection case shows how such categories cannot simply be translated into computa-

tional parameters but require a process of methodological negotiation between automatic models and disciplinary expertise. It is within this negotiation, more than in the specific results of the experimentation, that the contribution of this study is located: in the attempt to define a framework of observation and evaluation capable of making the use of generative systems in the enhancement of the informational contents of bibliographic and documentary heritage analyzable, and therefore governable.

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Librarians' Experiences and Expectations of the Narrative and Transmedia Shelf: Results from Two Focus Groups*

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ABSTRACT

This paper presents the results of two focus groups involving librarians on the topic of library collection communication. Specifically, it discusses the “narrative and transmedia shelf”, a pre-prototype model designed to enhance both physical and digital resources, analyzing its effectiveness and sustainability within professional practice. The study aims, on the one hand, to value the experimental activity conducted by libraries that tested the model and, on the other, to explore the potential and critical issues hypothesized by participants interested in the project. The main thematic nodes emerged include the impact on the organization and usage of collections, the role of digital integration, and the expected benefits. Furthermore, the analysis highlights constraints related to professional skills and technological infrastructure. In conclusion, the paper discusses participative and collaborative approaches for integrating the model into library services.

KEYWORDS

Focus group; Collection communication; Libraries; Transmedia and narrative shelf; Transmediality; Bibliographic mediation.

Tra esperienze e aspettative dei bibliotecari: risultati di due focus group sullo scaffale narrativo e transmediale

ABSTRACT

Il contributo presenta i risultati di due focus group che hanno coinvolto bibliotecari e bibliotecarie rispetto al tema della comunicazione delle collezioni delle biblioteche. Nel dettaglio, viene discusso il modello dello scaffale narrativo e transmediale, un pre-prototipo per la valorizzazione delle risorse fisiche e digitali, del quale si analizzano l'efficacia e la sostenibilità nella prassi professionale. Lo studio quindi mira, da un lato, a valutare l'attività sperimentale condotta dalle biblioteche che hanno testato il modello e, dall'altro, a esplorare potenzialità e criticità ipotizzate dai partecipanti interessati al progetto. I principali nuclei tematici emersi riguardano l'impatto sull'organizzazione e sulla fruizione delle collezioni, il ruolo del digitale e i benefici attesi, oltre alle criticità legate alle competenze professionali e alle infrastrutture tecnologiche. In conclusione, vengono discussi possibili approcci partecipativi e collaborativi per l'integrazione del modello nei servizi bibliotecari.

PAROLE CHIAVE

Focus group; Comunicazione delle collezioni; Biblioteche; Scaffale narrativo e transmediale; Transmedialità; Mediazione bibliografica.

* Gli autori condividono i contenuti del contributo nel suo insieme. A Sara Dinotola vanno attribuiti i paragrafi Introduzione, Focus group “Interessati”, Conclusioni e prospettive; a Roberto Testa i paragrafi Il focus group come strumento di ricerca in biblioteca, Metodologia e fasi dei focus group, Focus group “Sperimentatori”.

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Introduzione

La pervasività delle culture digitali, la crescente complementarità tra pratiche di lettura e consumi mediati, nonché le trasformazioni delle modalità con cui le persone cercano, esplorano e fruiscono di contenuti diversi rappresentano temi di notevole interesse per chi si occupa delle biblioteche e, in particolare, delle modalità di sviluppo, organizzazione e comunicazione delle collezioni. Diventa sempre più rilevante interrogarsi sulla necessità di dispositivi e strategie capaci di favorire forme di mediazione bibliografica più accessibili, attrattive e coerenti con la natura ibrida degli ecosistemi informativi contemporanei.

In questa prospettiva si colloca il progetto *Transmedia Library Shelf Experience*, finalizzato alla concettualizzazione e alla prototipazione di una nuova tipologia di scaffale, definito narrativo e transmediale.¹ Esso si configura come un'interfaccia ibrida, fisica e digitale, che si affianca agli scaffali tradizionali e al catalogo, fungendo da vetrina tematica collocata in un'area strategica della biblioteca oppure da punto di accesso alle diverse sezioni delle raccolte.

La dimensione narrativa dello scaffale riguarda la sua superficie comunicativa: pannelli con immagini e citazioni evocative, libri collocati di piatto, oggetti ed elementi di arredo invitano le persone a entrare in un universo tematico ben riconoscibile. La dimensione transmediale si concretizza invece nell'integrazione di contenuti eterogenei – libri cartacei, risorse elettroniche sottoscritte, contenuti digitali disponibili online e risorse autoprodotte dalla biblioteca –, collegati semanticamente e organizzati in percorsi dinamici. Questi ultimi possono essere esplorati attraverso grafi interattivi appositamente elaborati e resi accessibili tramite i touchscreen integrati nello scaffale, trasformato così in uno spazio di esplorazione fisico e digitale, in cui le traiettorie di ricerca non sono rigidamente predeterminate, ma aperte, serendipiche ed emotivamente coinvolgenti (Figura 1).



Figura 1. Il disegno dello scaffale narrativo e transmediale (elaborazione grafica di Federico Cesareo).

¹ Il quadro teorico e gli scenari di riferimento del progetto sono stati discussi in precedenti pubblicazioni, alle quali si rimanda per un approfondimento. La bibliografia sul progetto è disponibile nell'apposita sezione del sito web ufficiale: <https://www.transmedialibrary.unito.it/pubblicazioni>.

Il progetto, tuttora in corso, ha preso avvio nel 2023² e si inserisce all'interno di una linea di ricerca applicata di ambito biblioteconomico che prevede anche il coinvolgimento di esperti di altri settori disciplinari, indispensabile per arrivare alla realizzazione di un vero e proprio prototipo. Una tappa fondamentale di questo percorso consiste nella sperimentazione delle diverse versioni del pre-prototipo messe a disposizione presso alcune biblioteche. Queste occasioni si sono rivelate particolarmente utili per presentare in modo concreto l'idea del nuovo scaffale, raccogliere impressioni e suggerimenti da parte dell'utenza e orientare le fasi successive di sviluppo del prototipo.³

Altrettanto importante è il confronto con i professionisti che operano nelle biblioteche, direttamente coinvolti nella progettazione, nell'allestimento e nella gestione dello scaffale narrativo e transmediale, sia nelle fasi della prima sperimentazione sia quando esso è stabilmente integrato negli spazi della biblioteca.

Il presente articolo si propone di approfondire le percezioni dei bibliotecari e delle bibliotecarie rispetto allo scaffale narrativo e transmediale, con particolare attenzione alle potenzialità, alle criticità e agli impatti che esso può avere sulle pratiche professionali interne e sull'utenza. A tal fine sono stati realizzati due focus group che, considerati congiuntamente, permettono di confrontare esperienze e aspettative, offrendo una prospettiva qualitativa articolata sulle strategie e sulle condizioni di sviluppo di questa tipologia di scaffale.

Il focus group come strumento di ricerca in biblioteca

Il focus group (d'ora in poi FG) è una tecnica per la raccolta di dati in forma qualitativa, che ha origine nell'ambito del marketing con lo scopo di valutare le opinioni o reazioni degli utenti rispetto all'utilizzo o percezione di un determinato prodotto (Cooper et al. 2014, 57). Adottato dalle scienze sociali e poi integrato anche in area LIS, viene considerato uno strumento di analisi qualitativa per raccogliere contemporaneamente le opinioni di un gruppo di persone attraverso il confronto e la discussione, divenendo talvolta un incubatore per la nascita di idee (Wildemuth e Jordan 2017). Il FG può includere utenti delle biblioteche, bibliotecari, stakeholders, opinion leaders e altri soggetti in grado di garantire una certa ricchezza in termini di rilevanza delle informazioni rispetto all'obiettivo della ricerca. Uno dei primi esempi documentati di applicazione di FG in biblioteca risale agli anni '80 negli Stati Uniti, dove sono stati coinvolti tecnici e staff di sei biblioteche (pubbliche, accademiche e Library of Congress) con l'obiettivo di raccogliere le opinioni e i bisogni degli utenti rispetto al tema della transizione verso gli OPAC (Markey 1983). È in questo periodo che si diffonde maggiormente il *customer service*, quindi l'attenzione per i servizi offerti all'utente, motivo per cui le biblioteche iniziano ad avere bisogno di mettere insieme dati qualitativi e quantitativi per migliorare l'esperienza di utilizzo della biblioteca (Widdows, Hensler, e Wyncott 1991, 352–53).

² In occasione del seminario del 15 dicembre 2023 dal titolo "Sul confine. Le collezioni delle biblioteche tra gestione, produzione editoriale, esperienze di lettura" sono state illustrate le premesse concettuali del progetto. Si rimanda ai contributi di Maurizio Vivarelli e di Sara Dinotola all'interno del volume che raccoglie gli atti della giornata (Vivarelli e Dinotola 2024).

³ I risultati della prima sperimentazione sono descritti in (Dinotola e Testa 2026).

Diversi sono i casi di FG che includono gli utenti, soprattutto quando ci si riferisce a prodotti, servizi o pratiche di lettura. In questa sede ci si vuole soffermare però sui casi in cui vengono coinvolti i bibliotecari stessi, come ad esempio il redesign del sito web della biblioteca (MacMillan, McKee, e Sadler 2007); raccogliere le percezioni dei catalogatori rispetto a un processo di catalogazione centralizzato; informare i bibliotecari sulla creazione di un nuovo dipartimento interno e raccogliere informazioni su servizi considerati utili per la ricerca (Mellinger e Chau 2010). Altri studi riguardano la definizione di aree di ricerca da approfondire in determinati settori disciplinari, come nel caso della *health librarianship* (Spring 2014), l'individuazione di *trend* futuri riguardanti le biblioteche accademiche e la professione del bibliotecario (Gwyer 2015), o ancora la percezione sull'utilizzo delle risorse elettroniche nelle biblioteche universitarie (Ollé e Borrego 2010). Un altro caso riguarda la raccolta di feedback per intervenire sui processi gestionali e decisionali della biblioteca con lo scopo di migliorare l'ambiente di lavoro (Jordan e Haines 2017). In Italia sono stati condotti FG sul fabbisogno formativo dei bibliotecari delle biblioteche pubbliche (Solidoro, Bua, e Cالدارusa 2020) e sul rapporto di questi con i servizi e le tecnologie digitali in biblioteca (Battaglia e Mercanti 2024). Nella maggior parte dei casi i bibliotecari sono quindi coinvolti nei FG soprattutto quando avvengono modifiche ai servizi o alle modalità organizzative che impattano sulla loro attività; altre volte per indagare trend riguardanti la professione e la relativa formazione; infine vengono consultati per raccogliere feedback sull'uso dei servizi, sui comportamenti o sui bisogni informativi dell'utenza.

Metodologia e fasi dei focus group

È necessario innanzitutto specificare che in questa sede il FG viene inteso come uno strumento per raccogliere dati qualitativi da affiancare ad altri (di natura qualitativa e quantitativa) raccolti durante le precedenti attività di analisi.⁴ L'attività che viene presentata in questa sede potrà essere replicata in futuro con lo scopo di raggiungere il livello di saturazione (intesa come *data saturation*⁵) necessario per dichiarare conclusa l'analisi sul rapporto tra il nuovo modello di scaffale narrativo e transmediale e la professione dei bibliotecari, quindi il suo impatto, la sua rilevanza e le possibilità di implementazione nella prassi lavorativa.

È altrettanto necessario precisare che si tratta di un FG che parzialmente si discosta da quelli che sono i canoni e le indicazioni suggerite dalla letteratura:⁶ come si vedrà nel dettaglio in seguito, sono stati organizzati due diversi FG che, sebbene abbiano in comune il macro-tema (lo scaffale narrativo e transmediale), sono stati volutamente strutturati e condotti in una maniera per certi sensi diversa. Un aspetto di divergenza riguarda la composizione dei FG: il primo gruppo (d'ora in poi "Sperimentatori") include bibliotecari e bibliotecarie che hanno adottato il modello dello

⁴ Nelle varie sperimentazioni del pre-prototipo dello scaffale narrativo e transmediale realizzate presso varie biblioteche sono stati coinvolti gli utenti attraverso questionari, interviste in profondità, test di usabilità e osservazioni, per ottenere un bacino di dati eterogenei, necessario a fornire ai ricercatori una visione più ampia e completa possibile. Per maggiori informazioni si veda (Dinotola, Testa, e Vivarelli 2024) e (Dinotola e Testa 2026).

⁵ Relativamente all'emergere di nuove tematiche e feedback differenti da quelli raccolti; per un approfondimento sul concetto di *data saturation* si veda (Saunders et al. 2018).

⁶ Per un approfondimento più dettagliato si veda (Mellinger e Chau 2010; Jordan e Haines 2017; Wildemuth e Jordan 2017).

scaffale narrativo e transmediale all'interno della propria biblioteca e che hanno svolto una prima sperimentazione; il secondo gruppo (d'ora in poi "Interessati") invece è composto da bibliotecari e bibliotecarie che hanno manifestato un interesse verso il progetto, di cui sono venuti a conoscenza attraverso diverse modalità: la lettura degli articoli già pubblicati, la consultazione del sito web e dei canali social ufficiali, la partecipazione al seminario relativo al progetto⁷ e, in un caso, l'interazione con il pre-prototipo presentato presso la fiera Più libri più liberi di Roma nel dicembre 2024. Nessuno dei partecipanti del secondo gruppo ha avuto finora la possibilità di sperimentare lo scaffale direttamente nel proprio contesto di lavoro.

Un altro aspetto riguarda l'obiettivo dei FG: nel gruppo "Sperimentatori" è quello di raccogliere feedback, attraverso il confronto e la condivisione di esperienze, in merito alle sperimentazioni realizzate dalle varie biblioteche; nel gruppo "Interessati" è quello di indagare la fattibilità, i limiti e le possibili difficoltà di un modello non ancora adottato dai partecipanti.

La modalità adottata è quella del campionamento ragionato, tipico della ricerca qualitativa, in cui si dà priorità alla ricchezza di informazioni che si possono ottenere dai singoli soggetti, rinunciando alla rappresentatività della popolazione di riferimento (Faggiolani 2019, 96). In questo caso i criteri di selezione dei partecipanti dei gruppi sono ancora una volta differenti. Nel gruppo "Sperimentatori" la scelta è dettata dalle attività che sono state realizzate: sono state invitate le uniche biblioteche che hanno sperimentato il pre-prototipo, convocando i responsabili di ogni sede e coloro che si sono occupati dell'allestimento o della stessa sperimentazione.

Nel gruppo "Interessati" le biblioteche sono state selezionate seguendo due criteri: il primo è quello dell'interessamento o della curiosità nei confronti del progetto che è stata dimostrata in sedi differenti. Il secondo è quello della diversità: sono state coinvolte differenti tipologie di biblioteche per avere a disposizione un campione più ampio e variegato.

In generale sono state incluse biblioteche civiche, accademiche, specialistiche, fondazioni e altri istituti culturali. In entrambi i FG l'eterogeneità si manifesta non solo per tipologia di biblioteca rappresentata ma anche in termini di bacino di utenza di riferimento, dimensione della città, paese o quartiere, oltre che collocazione geografica e contesto socio-culturale. Considerando i singoli partecipanti (rappresentanti delle biblioteche), emergono parecchie differenze di età anagrafica, di mansione ricoperta in biblioteca (direttori, tecnici delle collezioni, catalogatori, tirocinanti), quindi di livello di studi e anni di esperienza di lavoro. Nella costruzione di gruppi eterogenei il concetto di *common ground*, "terreno comune" rappresentato dallo scaffale narrativo e transmediale – un progetto che tutti conoscevano – ha supportato molto la discussione e ha favorito l'interazione tra i diversi partecipanti, levigando le differenze sociali o di status professionali (Morgan 2017, 416). Per quanto concerne il reclutamento sono state invitate nel complesso via mail 15 biblioteche, 13 delle quali hanno accettato l'invito.⁸ Dal momento in cui i partecipanti provenivano da diverse parti d'Italia, si è optato per condurre entrambi i FG in modalità videoconferenza online. I FG sono stati condotti dagli stessi ricercatori, come spesso avviene in ambito LIS (Wildemuth

⁷ Il seminario "Transmedia Library Shelf Experience: Un nuovo modello per le biblioteche. Dalla teoria alla sperimentazione" è stato organizzato dal gruppo di ricerca *Transmedia Library Shelf Experience* il 4 dicembre 2025 presso il Polo del '900 di Torino.

⁸ Per non modificare il numero complessivo e la composizione del gruppo, al posto delle due biblioteche che non hanno risposto all'invito ne sono state selezionate altre con le stesse caratteristiche.

e Jordan 2017, 261), che si sono alternati nelle vesti di assistenti e moderatori: chi ha moderato il gruppo “Sperimentatori” ha assistito a quello degli “Interessati” e viceversa. Sebbene coinvolgere un moderatore o un assistente che conosca i partecipanti possa portare con sé il rischio di limitare i commenti negativi dei partecipanti, i ricercatori hanno invitato i partecipanti alla più totale sincerità e trasparenza, come si evince anche dai feedback non sempre positivi riportati nei paragrafi successivi. Con lo scopo di favorire un confronto basato su premesse quanto più condivise possibili e un solido *common ground*, ai membri del gruppo “Interessati” sono state inviate, con alcune settimane di anticipo rispetto alla data della sessione, due pubblicazioni di approfondimento sullo scaffale narrativo e transmediale.

Contemporaneamente alla fase di campionamento sono state realizzate le due guide contenenti le aree oggetto di indagine e le domande da porre ai partecipanti. L’aderenza a una guida contenente le domande ha facilitato sia la conduzione che l’analisi, in quanto la suddivisione tematica era stata già effettuata in fase di discussione; nonostante ciò, la discussione è stata flessibile e ha incluso anche alcune domande che i ricercatori hanno formulato a partire da tematiche emerse durante lo svolgimento. Ogni discussione, della durata di circa 90 minuti, è stata registrata e trascritta per poi essere analizzata manualmente secondo i principi dell’analisi tematica, prestando attenzione alle opinioni discordanti, alle parole-chiave e ai temi ricorrenti.

Focus group “Sperimentatori”

Il primo FG ha visto la partecipazione di sette persone provenienti dalle cinque differenti biblioteche che hanno testato fino a questo momento lo scaffale narrativo e transmediale.⁹ Sono state incluse biblioteche civiche di grandi città metropolitane (Biblioteche Civiche Torinesi e Biblioteche di Roma), così come quelle di piccoli comuni (Robecchetto con Induno); le altre biblioteche coinvolte sono Fondazioni (Polo del ‘900) e un MAB (Museo Archivio Biblioteca Montelupo Fiorentino). Risultano così presenti le seguenti regioni: Piemonte (2), Lombardia (1), Toscana (1), Lazio (1). Le biblioteche sono state rappresentate da una persona sola, ad eccezione di due biblioteche (Biblioteche Civiche Torinesi e Biblioteche di Roma), in cui la sperimentazione è stata condotta da tirocinanti dell’Università di Torino, che quindi sono stati affiancati nel FG dai relativi responsabili e tutor di sede.

I nuclei tematici affrontati durante la discussione del gruppo “Sperimentatori” ripercorrono in un certo senso le fasi dell’attività sperimentale svolta dalle biblioteche, permettendo di ricostruire l’intero processo (si veda la Tabella 1 per una sintesi): selezione dei temi e delle risorse dello scaffale; preparazione e allestimento dello scaffale e accesso ai contenuti; prestito delle risorse a scaffale; osservazioni sul comportamento degli utenti; criticità riscontrate ed eventuali suggerimenti.

⁹ Una delle biblioteche coinvolte non ha ancora avviato la sperimentazione ma, trovandosi in uno stadio medio-avanzato dal punto di vista dell’allestimento del pre-prototipo, è stata comunque invitata a partecipare.

Nucleo tematico	Parole chiave	Difficoltà	Elementi di interesse
Selezione dei temi e delle risorse	Valorizzazione; coinvolgimento; impatto; attrattività; giornate internazionali; risorse audio e podcast; target di pubblico; bisogni informativi.	-	Spunti da vetrine tematiche pre-esistenti; ricerca dei contenuti a partire dal proprio catalogo; ampi elenchi di risorse da selezionare; valorizzazione di contenuti digitali presenti solo in locale.
Allestimento dello scaffale e accesso ai contenuti	Open access; abbonamenti sottoscritti dalle biblioteche; piattaforme freemium; legame tra utenza e biblioteche; video-recensioni; rubriche.	Recupero dei devices da inserire nello scaffale; coordinamento con gli uffici amministrativi; mancanza di attrezzature, di competenze e di tempo per la creazione di contenuti digitali.	Scelta di risorse open access o accessibili al pubblico della biblioteca; circa un mese di lavoro per realizzare lo scaffale; tentativi di suggerimento di letture da parte dei bibliotecari sui social.
Prestito delle risorse	Disponibilità al prestito; prestito intersistemico; aumento del prestito; contenuti digitali.	Alcune biblioteche hanno un sistema di prestito intersistemico molto laborioso; manca un dato numerico sui prestiti relativi allo scaffale.	Spesso i contenuti digitali attirano più di quelli fisici; valorizzare maggiormente il patrimonio presente nella sede in cui si svolge la sperimentazione.
Comportamento degli utenti	Curiosità; cambio di comportamento; nuova modalità di presentazione dei contenuti; QR codes; grafo; interazione con i devices.	-	Grafi digitali risultano accattivanti e user-friendly; curiosità verso i libri con le copertine visibili e i QR codes.
Criticità riscontrate	Devices nuovi; impatto visivo; tempo; gestione e cura dello scaffale; coordinamento; strumenti utili; condivisione.	Mancanza di tempo nella quotidianità della professione bibliotecaria; avere risorse umane destinate alla gestione dello scaffale; mancanza di devices porta risultati "artigianali" e poco attraenti.	Coordinamento per risolvere problemi comuni, per suggerire liste di contenuti o tematiche; condivisione di file o templates per semplificare il lavoro.

Tabella 1. I nuclei tematici del FG "Sperimentatori".

Lo scaffale narrativo e transmediale in generale è considerato dagli "Sperimentatori" uno strumento in grado di valorizzare le collezioni delle biblioteche in una modalità innovativa, attraente e coinvolgente. Lo scaffale è stato realizzato in alcuni casi prendendo spunto da vetrine tematiche pre-esistenti, che solitamente riguardano l'attualità o che fanno riferimento a giornate internazionali. Il modello viene visto anche come un dispositivo che permette di valorizzare le proprie collezioni o i propri documenti d'archivio, ad esempio quelli che sono presenti solo su dispositivi locali (come digitalizzazioni di VHS, di fotografie o manifesti) o che non sono mai state messe in evidenza. È invece meno solito che lo scaffale venga utilizzato per presentare tematiche proposte da singoli bibliotecari in base a un loro specifico interesse. Per quanto riguarda la selezione dei contenuti, tutte le biblioteche coinvolte hanno effettuato le ricerche a partire dal proprio catalogo, per poi estendersi a contenuti correlati che sono presenti sul web. In particolare, tra questi, le risorse audio e podcast sono le tipologie prevalenti, in quanto vengono strategicamente considerati dei mezzi per intercettare una buona porzione di pubblico giovane; in due specifici casi le biblioteche hanno selezionato dei contenuti appositamente per un certo target di utenza, cercando di captare in anticipo i relativi bisogni informativi. Il processo di selezione di solito prevede la stesura di una lista di risorse molto ampia sull'argomento prescelto e poi una scrematura fino ad arrivare al numero di risorse desiderato (spesso tra le 40 e le 50 risorse digitali e tra le 80 e 100 fisiche). L'obiettivo, per una biblioteca, è "includere più autori possibili, così come anche case editrici di piccola e media dimensione, [...] cercare di dare luce un po' a tutto quanto". Le risorse digitali selezionate sono quasi tutte *open access* o incluse in abbonamenti sottoscritti dalla biblioteca (che quindi in questi casi si riferisce al proprio pubblico di utenti registrati al servizio). Quando le risorse *open access* relative a una tematica scarseggiano, vengono

inclusi contenuti da piattaforme *freemium* (quindi con funzionalità gratuite limitate o inserimento di pubblicità). Solo una biblioteca si pone il problema della tenuta dei *link* sul lungo periodo e del *copyright* relativo alle risorse esterne.

La maggior parte delle biblioteche ha impiegato circa un mese tra recupero delle risorse, selezione e allestimento dello scaffale. Le maggiori difficoltà sono state riscontrate nel recupero dei *devices* e nel coordinamento con uffici centrali e di comunicazione. Il lavoro più impegnativo in termini di tempo risulta essere quello di selezione delle risorse, soprattutto per i temi meno circoscritti, dove “si rischia di diventare troppo dispersivi” o più soggettivi, come un caso di uno scaffale legato alle emozioni, in cui “un determinato contenuto non è detto che susciti a diverse persone la stessa emozione”.

La creazione di contenuti da parte della biblioteca, quali recensioni, video-consigli di lettura e altre forme di promozione delle collezioni è un’idea considerata dai partecipanti molto interessante, soprattutto perché può rafforzare (o creare, qualora non ci sia) il legame tra l’utente e la biblioteca: le recensioni (in formato video o testuale) avvicinano l’utente ai contenuti attraverso la figura di mediazione del bibliotecario che, secondo una partecipante, dovrebbe, nel caso dei video, “metterci la faccia [...] perché funziona molto di più rispetto ad altri video: sono questi i contenuti che creano quel legame personale tra l’utente che sta al di là dello schermo e la biblioteca”. Sorgono alcune opinioni contrastanti, dovute alla dimensione della biblioteca e della popolazione di riferimento: nel dettaglio, nei piccoli centri abitati spesso si crea una comunità attorno alla biblioteca, cosa che invece sembra avvenire molto meno frequentemente nelle grandi metropoli. Per i partecipanti questo aspetto è molto importante quando si ragiona sulle modalità di comunicazione proprie di ogni biblioteca nell’ambiente digitale. Emergono alcune problematiche relative alla mancanza di tempo per la creazione di contenuti per i social, di competenze di comunicazione digitale e talvolta di attrezzatura. Tuttavia in due casi sono state realizzate rubriche sui social in cui i bibliotecari suggeriscono delle letture.

In tutte le biblioteche le risorse fisiche presenti nello scaffale erano state rese disponibili al prestito per l’utenza durante la sperimentazione. Nelle biblioteche in cui la procedura di prestito intersistemico è parecchio complicata si riflette sulla possibilità di valorizzare maggiormente il patrimonio presente in sede, infatti un bibliotecario fa notare che quella relativa allo scaffale “deve diventare una modalità di lavoro più agile e riferita al patrimonio della sede, perché continuare a muovere le collezioni tra le varie sedi è complesso”. Nonostante nella maggior parte dei casi sia stato notato un aumento del numero delle risorse prese in prestito,¹⁰ dal confronto emerge la mancanza di un dato numerico, in quanto non è stato monitorato questo aspetto. In altri casi invece la parte digitale ha attirato di più l’attenzione e l’utenza ha usufruito principalmente dei contenuti online, trascurando la possibilità di effettuare il prestito delle risorse analogiche.

In tutte le biblioteche è stato notato un diverso comportamento degli utenti nell’interazione con lo scaffale narrativo e transmediale, se comparata a quella che avviene con uno scaffale tradizionale: l’aspetto prevalente è quello della curiosità verso una nuova modalità di presentazione dei contenuti (i libri con le copertine visibili, il touchscreen, i vari QR codes diffusi). Risalta, tra i commenti degli utenti, chi si riferisce al grafo sostenendo “mi piaceva proprio perché non c’erano tante cose

¹⁰ Relativamente alle tematiche presentate negli scaffali narrativi e transmediali.

ed era bello, accattivante”. Soprattutto si nota l’interesse da parte delle nuove generazioni ad avvicinarsi allo scaffale e interagire con i *touchscreen* e le risorse.

Passando alle criticità, in generale le biblioteche concordano sulla necessità di avere a disposizione dei *devices* nuovi e che possano avere un impatto significativo a livello visivo sull’utenza. Infatti il grafo viene riconosciuto in generale come l’elemento più caratteristico e di maggior *appeal* dell’esperienza dello scaffale narrativo e transmediale. La problematica più evidente rispetto all’introduzione della cura dello scaffale transmediale tra le attività quotidiane della biblioteca risiede però anche in un altro fattore: il poco tempo a disposizione del personale per allestire e curare nel tempo lo scaffale. Se il problema della mancanza di *devices* può risolversi temporaneamente con strumenti più semplici e “artigianali”, pur riducendo l’*appeal* e il livello di interattività dello scaffale, il secondo richiede una maggiore attenzione. Una bibliotecaria fa notare, infatti, che “comparando il tempo e le risorse che il bibliotecario mette nella realizzazione del grafo e la resa finale dell’allestimento dello scaffale, se dovessi chiedermi se il gioco vale la candela, farei fatica a rispondere”, anche se “chi ha poi provato a interfacciarsi con il grafo è rimasto soddisfatto, perché l’interesse è alto e la curiosità pure”. La gestione dello scaffale narrativo e transmediale, secondo il parere di altre biblioteche, dovrebbe essere destinata a una figura che in termini lavorativi si dedichi principalmente a questo lavoro, che comunque per un bibliotecario “è sicuramente la direzione in cui devono andare le biblioteche”; i primi pre-prototipi, nella maggior parte dei casi, sono stati infatti realizzati da tirocinanti o volontari del servizio civile digitale, quindi risorse umane temporaneamente a disposizione della biblioteca e con mansioni talvolta limitate.

Una possibile soluzione al problema potrebbe per certi versi risiedere nella creazione di un coordinamento tra le biblioteche aderenti al progetto *Transmedia Library Shelf Experience*, proposta che nasce contestualmente durante l’indagine. Questo permetterebbe il confronto, la risoluzione di problematiche tecniche comuni o il suggerimento di testi, risorse e tematiche. La condivisione degli strumenti per l’organizzazione e creazione, quali moduli per la selezione delle risorse, modelli per i contenuti grafici, tutorial e suggerimenti è vista positivamente, infatti una bibliotecaria afferma che “pensare oggi di realizzare un nuovo scaffale, ora che abbiamo i modelli da seguire, le grafiche e i file da compilare è sicuramente più facile rispetto alla prima volta [...] e sarebbe bello condividere questi modelli in modo da facilitare le attività delle altre biblioteche”. Uno strumento molto utile sarebbe quello di avere dei *templates* personalizzabili e delle liste di file condivisi con bibliografie o sitografie che possono essere d’aiuto anche nel semplificare le procedure di selezione e ridurre notevolmente i tempi necessari per la realizzazione e l’allestimento dello scaffale.

Focus group “Interessati”

Il secondo FG ha visto la partecipazione di nove persone afferenti a otto istituzioni bibliotecarie italiane situate in aree geografiche differenti. Le regioni rappresentate sono il Piemonte (due biblioteche), la Lombardia (un sistema bibliotecario territoriale), il Trentino-Alto Adige (una biblioteca), l’Emilia-Romagna (una biblioteca), l’Umbria (una biblioteca) e l’Abruzzo (due biblioteche). Nel campione figurano sia biblioteche che operano in piccoli centri urbani, sia istituzioni collocate in città di dimensioni più ampie. Quanto alla tipologia, prevalgono le biblioteche pubbliche, ma si rileva anche la partecipazione di una biblioteca accademica, di una specialistica e di una ecclesiastica.

La discussione è stata organizzata con l'obiettivo di esplorare le percezioni e le aspettative dei bibliotecari e delle bibliotecarie rispetto all'introduzione dello scaffale narrativo e transmediale, sia in termini assoluti sia in relazione alle specifiche realtà in cui operano.

L'analisi della trascrizione del FG ha permesso di individuare le principali dimensioni tematiche emerse nel corso della discussione e le prospettive interpretative attraverso cui i partecipanti hanno riflettuto sulle potenzialità e sulle criticità dello strumento (Tabella 2).

Nucleo tematico	Parole chiave	Criticità	Strategie di mitigazione
Attrattività della biblioteca	Curiosità; superamento dell'effetto soglia; permanenza in biblioteca; valorizzazione dello spazio bibliotecario; reputazione della biblioteca		
Accessibilità e scoperta delle collezioni	Organizzazione tematica; interfaccia intuitiva; ricerca esplorativa; coinvolgimento dei pubblici; attrattività per i giovani utenti	Tempo limitato degli utenti; competenze digitali disomogenee	Accesso remoto ai percorsi e ai contenuti digitali; mediazione bibliotecaria
Valorizzazione del patrimonio, integrazione delle risorse e produzione di contenuti	Fondi storici e locali; digitalizzazione; integrazione analogico-digitale; storytelling delle collezioni; contenuti originali; produzione culturale partecipata	Catalogazione preliminare dei fondi storici; risorse economiche limitate	Digitalizzazione selettiva; sviluppo graduale dei percorsi; uso di risorse digitali già disponibili
Impatto sulle pratiche professionali dei bibliotecari	Continuità e sistematizzazione di pratiche esistenti; maggiore visibilità del lavoro bibliotecario; sviluppo di nuove competenze	Resistenza al digitale e alle innovazioni da parte di alcuni bibliotecari	Formazione e sensibilizzazione di tutto il personale
Sostenibilità organizzativa e tecnologica	Integrazione tra tecnologia e spazio bibliotecario; tempo di lavoro; progettazione e manutenzione dei percorsi	Carenza di personale; budget limitati; vincoli logistici; obsolescenza tecnologica	Cooperazione tra biblioteche; produzione collaborativa dei percorsi; riuso dei contenuti; partecipazione a bandi; tecnologie modulari

Tabella 2. I nuclei tematici del FG "Interessati".

Uno dei temi più ricorrenti riguarda il potenziale della nuova tipologia di scaffale nel migliorare l'attrattività complessiva della biblioteca. Alcuni partecipanti sottolineano infatti che lo scaffale narrativo e transmediale, grazie alle componenti che lo distinguono da quello tradizionale e alla maggiore cura per la dimensione visiva ed estetica, può suscitare la curiosità delle persone, incoraggiandole a entrare in biblioteca, a trattenersi più a lungo e a ritornare. Come osserva un bibliotecario: "Avere uno scaffale di questo tipo avvicina, mette curiosità [...] può essere un modo per abbattere l'effetto soglia".

In questo senso, l'introduzione dello scaffale narrativo e transmediale viene interpretata come un possibile fattore di rafforzamento della reputazione della biblioteca e della sua capacità di proporsi quale luogo culturalmente rilevante all'interno del contesto territoriale di riferimento.

Su un piano più specifico, i partecipanti considerano il nuovo dispositivo come uno strumento in grado di facilitare l'accessibilità e la fruibilità delle collezioni da parte delle persone, principalmente nelle biblioteche pubbliche. L'organizzazione dei libri per aree tematiche, l'esposizione di piatto, la vicinanza sullo scaffale di diverse tipologie di libri (narrativa, saggistica, fumetti) e l'integrazione tra libri e risorse multimediali sono giudicate soluzioni più intuitive per il pubblico, capaci di favorire la ricerca esplorativa.

Dal FG emerge infatti la convinzione che l'introduzione di questo scaffale possa contribuire a migliorare l'incontro tra lettori e risorse bibliografiche, soprattutto nelle biblioteche in cui viene messa in discussione l'efficacia dell'organizzazione tradizionale delle raccolte secondo la Classificazione decimale Dewey che, pur garantendo un ordinamento sistematico dei documenti, non sempre facilita l'orientamento dei lettori. Ad esempio un bibliotecario commenta: "Siamo stanchi dell'esposizione a scaffale aperto secondo la Dewey [...] vediamo che non è molto fruibile per tutti". Un'altra partecipante sottolinea come nella propria biblioteca sia attualmente in corso un processo di riorganizzazione spaziale delle collezioni basato su aree tematiche individuate a partire dagli interessi della comunità di riferimento; in questa prospettiva, l'introduzione degli scaffali narrativi e transmediali rappresenta un ulteriore sviluppo di tale approccio alternativo, pensato per facilitare la scoperta delle collezioni.

Tuttavia, dalla discussione emerge che l'adozione dello scaffale narrativo e transmediale non presuppone necessariamente un cambiamento complessivo delle modalità di organizzazione spaziale delle raccolte. I partecipanti osservano infatti che lo scaffale può rappresentare un'opportunità anche per le biblioteche che non possono o non intendono ripensare tali modelli, in quanto l'inserimento di questi dispositivi permette di creare utili isole tematiche in punti strategici. Da tutti viene accolta molto positivamente la flessibilità del nuovo scaffale, ossia la possibilità di adattare e di aggiornare a cadenza regolare i temi e i percorsi in relazione all'attualità o agli interessi della comunità.

Un ulteriore ambito in cui i partecipanti riconoscono il potenziale dello scaffale narrativo e transmediale riguarda i fondi storici e le collezioni speciali e locali, spesso poco visibili o difficilmente accessibili al pubblico generalista. Questo aspetto è messo in evidenza in particolare dalle biblioteche che conservano tali tipologie di raccolte: lo scaffale può diventare uno strumento di mediazione e valorizzazione sia degli originali sia delle eventuali digitalizzazioni, inoltre permette di costruire relazioni con gli altri documenti posseduti e con contenuti digitali fruibili online. Un bibliotecario ricorda, tuttavia, che la possibilità di elaborare tali percorsi dipende anche da attività preliminari di catalogazione dei fondi storici, che richiedono tempo e risorse economiche non sempre disponibili. Nel complesso, l'idea di utilizzare lo scaffale narrativo e transmediale come interfaccia per integrare tipologie diverse di risorse è valutata positivamente, giacché consente di dare vita a collezioni più dinamiche, multiformi e multilivello.

Accanto alla valorizzazione delle collezioni a scaffale aperto e dei fondi storici, i bibliotecari e le bibliotecarie coinvolti nella discussione individuano un'ulteriore potenzialità dello scaffale narrativo e transmediale, vale a dire la mediazione di contenuti digitali originali, come podcast, archivi digitali partecipati o contributi realizzati dalla biblioteca e dagli utenti. Questa possibilità aiuta a rafforzare il ruolo della biblioteca non solo come luogo di accesso alla conoscenza, ma anche come attivatrice di relazioni e spazio di produzione culturale condivisa.

Un'altra dimensione tematica ricorrente è legata al concetto di *storytelling*. Diversi membri del gruppo considerano lo scaffale narrativo e transmediale un potente strumento di narrazione, capace di rendere più visibile il lavoro di mediazione svolto dai professionisti dell'informazione e di rafforzare la connessione tra la biblioteca e i suoi pubblici.

In particolare, alcuni bibliotecari sottolineano che le potenzialità attrattive dello scaffale riguardano soprattutto i più giovani, ovvero i nativi digitali, già abituati a una dieta mediale molto ricca e diversificata. Per questo motivo, un partecipante individua nelle biblioteche scolastiche un con-

testo particolarmente adatto all'introduzione di questa nuova interfaccia: ciò favorirebbe modalità di utilizzo della biblioteca meno passive e "lo sviluppo dell'intelligenza connettiva".

Dal confronto emerge, però, che lo scaffale narrativo e transmediale può suscitare interesse anche tra le persone appartenenti a fasce d'età più avanzate. Allo stesso tempo, una bibliotecaria osserva che non tutti gli utenti della sua biblioteca si fermerebbero a esplorare gli scaffali narrativi e transmediali o a navigare i grafi interattivi accessibili tramite i touchscreen integrati, sia per la scarsa disponibilità di tempo da trascorrere in biblioteca, sia a causa della limitata dimestichezza con gli strumenti digitali. Per affrontare queste possibili difficoltà si suggeriscono due strategie. Da un lato, offrire la possibilità di accedere ai contenuti digitali proposti anche da remoto, così da consentire agli utenti di approfondire i percorsi in momenti diversi dalla visita in biblioteca. Dall'altro, rafforzare il ruolo di mediazione e di accompagnamento dei bibliotecari, come già avvenuto in occasione dell'introduzione di nuovi servizi digitali, quali il prestito di tablet o di audiolibri.

L'impatto che l'introduzione dello scaffale narrativo e transmediale potrebbe avere sul lavoro dei bibliotecari rappresenta un ulteriore tema di discussione. Tutti i partecipanti concordano nell'interpretare il nuovo dispositivo non come una novità assoluta rispetto alle pratiche bibliotecarie esistenti, ma piuttosto come una loro evoluzione. Dagli interventi emerge infatti che molte delle attività previste per l'allestimento dello scaffale – costruzione di percorsi tematici, selezione e mediazione delle risorse di diversa tipologia, elaborazione di bibliografie e sitografie, preparazione di vetrine – sono già parte del lavoro quotidiano, ma possono trovare in questo nuovo modello una forma più strutturata e visibile.

A detta di una partecipante: "Partiamo da qualcosa che abbiamo sempre fatto, però portandolo a un livello di approfondimento e di coinvolgimento di media diversi completamente diverso". Per realizzare questo passaggio tutti sottolineano la necessità di acquisire conoscenze e competenze specifiche, soprattutto nell'ambito digitale, nell'elaborazione dei grafi interattivi e nella produzione di contenuti. In questo senso, considerano l'introduzione dello scaffale narrativo e transmediale come un'opportunità di sviluppo professionale e di aggiornamento delle pratiche di mediazione delle collezioni.

Vengono portate alla luce anche possibili difficoltà di natura soggettiva. In particolare, si osserva che non tutti i bibliotecari mostrano la stessa propensione verso l'uso delle tecnologie digitali e che alcuni potrebbero non essere interessati né alla formazione necessaria per l'allestimento dello scaffale, né alla mediazione di questi strumenti nei confronti del pubblico.

Il FG è stato un'occasione di riflessione anche sulle difficoltà legate alla dimensione organizzativa e al tempo di lavoro. Molti partecipanti sottolineano come la progettazione e la manutenzione dei percorsi richiederebbero un investimento significativo di tempo, difficilmente sostenibile nelle condizioni di lavoro attuali, spesso caratterizzate da carenza di personale e da un forte carico di lavoro ordinario in tutte le tipologie di biblioteche. Come afferma un bibliotecario: "Il problema è chi prepara questi contenuti e quando li prepara [...] se ne faccio uno all'anno non ha senso". Un'altra sottolinea analogamente: "Il problema del tempo del lavoro del bibliotecario è enorme". Questa situazione risulta ulteriormente amplificata nelle biblioteche mono-operatore, dove l'introduzione di nuovi strumenti e servizi rischia di gravare su una sola figura professionale.

I partecipanti non si limitano a individuare tali possibili punti critici, infatti sottolineano come molti di essi potrebbero essere almeno in parte mitigati attraverso strategie di cooperazione tra biblioteche. In particolare, viene più volte richiamata la possibilità di sviluppare i percorsi tematici in forma collaborativa, all'interno di reti bibliotecarie o sistemi territoriali, riducendo così il carico

di lavoro per le singole istituzioni. La condivisione dei percorsi e dei materiali potrebbe infatti consentire di riutilizzare e adattare contenuti già prodotti da altre biblioteche, favorendo economie di scala nella progettazione degli scaffali narrativi. Alcuni membri del gruppo suggeriscono inoltre di estendere le forme di collaborazione e scambio anche oltre le reti bibliotecarie, coinvolgendo tutte le biblioteche interessate alla sperimentazione degli scaffali narrativi e transmediali.

Un secondo ordine di criticità riguarda gli aspetti tecnologici e logistici. Più nel dettaglio, vengono menzionati i costi di acquisto e manutenzione dell'hardware – non sostenibili da tutte le biblioteche, ma potenzialmente risolvibili ad esempio attraverso la partecipazione a bandi –, così come il rischio di obsolescenza delle tecnologie e le difficoltà legate all'inserimento di dispositivi digitali in edifici storici o in spazi difficilmente riconfigurabili.

Per affrontare, almeno in parte, questi problemi, alcuni partecipanti sottolineano l'importanza di disporre di soluzioni tecnologiche modulari e facilmente implementabili, ad esempio strumenti progettati per integrarsi con gli arredi bibliotecari esistenti o per essere utilizzati in modo flessibile in contesti diversi. In questa prospettiva, la standardizzazione di alcune soluzioni tecniche e la disponibilità di strumenti pronti all'uso potrebbero contribuire a ridurre le barriere organizzative e tecnologiche, rendendo più sostenibile l'introduzione dello scaffale anche nelle biblioteche di piccole dimensioni o con risorse limitate.

Conclusioni e prospettive

I risultati dei due FG possono essere analizzati congiuntamente per mettere a confronto la dimensione esperienziale e quella potenziale. Infatti, se coloro che hanno già sperimentato il pre-prototipo dello scaffale narrativo e transmediale descrivono i primi effetti concreti del nuovo dispositivo sulle diverse fasi della gestione delle collezioni e sul comportamento degli utenti, le biblioteche interessate delineano scenari ipotetici. Nel complesso, dai due gruppi emerge una significativa convergenza nella percezione dello scaffale narrativo e transmediale, sia rispetto alle sue potenzialità sia rispetto alle condizioni necessarie per la sua implementazione.

I risultati presentati hanno natura esplorativa e si basano su un numero limitato di partecipanti selezionati attraverso campionamento ragionato; non sono quindi generalizzabili, ma offrono indicazioni utili per comprendere le modalità con cui il modello viene interpretato dai professionisti e le condizioni che ne possono favorire lo sviluppo.

L'avvicinamento al progetto *Transmedia Library Shelf Experience* deriva dall'attenzione dei professionisti intervenuti nei due FG verso le questioni relative alla mediazione dell'offerta bibliografica. Tutti i partecipanti ritengono particolarmente importante favorire l'esplorazione serendipica da parte dell'utenza, tant'è che a questo scopo hanno già sviluppato strategie diversificate, dall'allestimento di vetrine tematiche al ripensamento dei sistemi per la collocazione spaziale dei libri. Questa linea operativa si colloca nel solco di un filone di studi biblioteconomico che, da diversi decenni, da un lato indaga le pratiche di browsing e di scoperta non lineare delle nuove letture (Ross 2001; Mikkonen e Vakkari 2012), dall'altro mira a definire e a testare sul campo nuovi e più intuitivi modelli di configurazione spaziale delle raccolte (Martínez-Ávila 2017).¹¹

¹¹ Nell'ambito del progetto *Transmedia Library Shelf Experience* è in corso una ricerca che intende approfondire tali que-

Non sorprende, dunque, che in entrambi i FG lo scaffale non venga percepito come una rottura rispetto alle pratiche bibliotecarie esistenti, ma come una loro trasformazione, volta a favorire l'incontro tra pubblico e raccolte. Le biblioteche sperimentatrici confermano il potenziale dello scaffale narrativo e transmediale a partire dall'esperienza, evidenziando un'interazione diversa rispetto agli scaffali tradizionali, che andrà monitorata nel tempo.

Un'altra questione messa in evidenza riguarda l'ampliamento del concetto di collezione. Anche in questo caso, il nuovo scaffale non determina discontinuità, ma una maggiore sistematizzazione di fenomeni già evidenti in molte realtà. Da tempo, infatti, le collezioni bibliotecarie sono caratterizzate dall'ibridazione di tipologie documentarie e di formati, in linea tanto con l'evoluzione dell'offerta quanto con quella delle pratiche di lettura e dei consumi mediali, caratterizzati da un continuo utilizzo di media diversi, tradizionali e digitali (Jenkins 2014). Come osservano i partecipanti ai due gruppi, esplicitare la natura transmediale delle collezioni permette di dare maggiore solidità – sul piano concettuale e su quello concreto – a tendenze già in atto.

Per quanto riguarda la produzione di contenuti originali, che concretizza il principio dell'*'inside-out'* (Dempsey 2012), essa non rappresenta una novità assoluta per molte biblioteche: si pensi, ad esempio, alla diffusione di tali pratiche durante la pandemia (Dinotola 2020). Tuttavia, lo scaffale narrativo e transmediale offre interessanti possibilità di coinvolgere il pubblico in modo più sistematico nella creazione partecipata di contenuti, attività che permette di sviluppare competenze digitali fondamentali, come illustrato dal *DigComp 3.0*.¹²

Accanto alle potenzialità dello scaffale, un tema di riflessione imprescindibile riguarda le sue principali criticità. Confrontando le riflessioni dei due gruppi, non emerge uno scarto significativo tra chi ha finora solo immaginato di introdurre il dispositivo e chi ha potuto testarlo realmente. Tutti concordano nel sostenere che le criticità non riguardano il valore del modello in sé, quanto le condizioni organizzative, professionali e tecnologiche necessarie per renderlo praticabile nel tempo.

In questo quadro, i bibliotecari e le bibliotecarie individuano nella cooperazione tra istituzioni una possibile strategia per rendere più sostenibile l'implementazione dello scaffale narrativo e transmediale, ridurre il carico di lavoro e favorire una diffusione più ampia della nuova interfaccia. A partire da queste sollecitazioni, emerge la possibilità di costituire una rete coordinata dal gruppo di ricerca che si sta occupando della prototipazione del nuovo scaffale. Questa rete si configurerà come uno spazio di confronto, condivisione di buone pratiche e scambio di materiali, elenchi di risorse e grafi tra le biblioteche che partecipano attivamente al progetto. Inoltre, promuoverà momenti di restituzione pubblica e contribuirà alla riflessione collettiva sulle potenzialità e sui limiti del nuovo dispositivo.

In tale prospettiva, l'approccio partecipato rappresenta non solo una modalità organizzativa utile a sostenere l'implementazione del modello, ma anche una condizione coerente con l'idea stessa dello scaffale narrativo e transmediale come strumento dinamico di mediazione delle collezioni e di costruzione condivisa di percorsi negli spazi fisici e digitali delle biblioteche.

stioni, attraverso il coinvolgimento diretto di biblioteche, librerie, lettrici e lettori. I risultati saranno illustrati in una prossima pubblicazione.

¹² Si tratta del documento europeo, giunto alla quinta edizione, che definisce l'insieme delle conoscenze, delle abilità e delle attitudini necessarie per interagire con le tecnologie digitali in modo sicuro, critico e responsabile, nell'apprendimento, nel lavoro e nella società in generale (Cosgrove e Cachia 2025).

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The hidden dimension of sport: preservation strategies, and protection perspectives for Sports Archives

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ABSTRACT

The paper systematically analyses sport archives, outlining their general characteristics and the specific features deemed particularly relevant to archival research. The selected approach centres on a critical analysis aimed at identifying new investigative prospects and promoting the development of this specialized sector. In particular, the study focuses on the 2024 census conducted by the author to map the presence or absence of such archives in the Metropolitan City of Florence and to highlight the challenges of preserving and accumulating sport-related documentation. By engaging numerous associations and sports clubs operating in the area, the survey identifies challenges pertaining to both the record-creating entities and the documents they generate, preserve, and transmit, offering a detailed portrait of the local archival reality.

KEYWORDS

Sports archives; Archival heritage; Archival preservation; Sport and archives.

La dimensione nascosta dello sport: strategie di conservazione e prospettive di tutela negli Archivi Sportivi

ABSTRACT

Il presente contributo offre una disamina sistematica degli archivi sportivi, delineandone le caratteristiche generali e le specificità ritenute particolarmente rilevanti per la ricerca archivistica. L'approccio adottato si configura in un'analisi critica finalizzata ad aprire nuove prospettive di indagine e a promuovere lo sviluppo di questo settore specialistico. In modo esplicito, il lavoro si concentra sul censimento eseguito nel 2024, realizzato dalla scrivente, finalizzato a rilevare la presenza o l'assenza di tali archivi nella provincia di Firenze e a mettere in luce le criticità connesse alla conservazione e alla sedimentazione della documentazione sportiva sul territorio. L'indagine ha coinvolto un ampio numero di associazioni e società sportive operanti nella provincia, evidenziando le problematiche relative sia ai soggetti produttori sia ai materiali documentari da loro generati, conservati e trasmessi, e fornendo così una fotografia dettagliata della realtà storico-archivistica locale.

PAROLE CHIAVE

Archivi dello sport; Patrimonio archivistico; Conservazione archivistica; Sport e archivi.

Introduzione

Lo sport, in quanto fenomeno sociale complesso e multidimensionale, richiede un'analisi in grado di coglierne le implicazioni culturali, educative, economiche e simboliche, non riducibili alla sola dimensione agonistica o amatoriale (Teja 2018b, 193). Proprio questa complessità ha però contribuito ad un progressivo disinteresse da parte della comunità scientifica, ancora distante dall'integrare la cultura sportiva nei propri ambiti di ricerca. In tale prospettiva si inserisce l'attività della Società Italiana di Storia dello Sport (SISS)¹ che da anni promuove la ricerca storica sullo sport come elemento significativo per l'analisi dei processi culturali, sociali e politici (Teja 2018a, 7).

Permangono tuttavia criticità rilevanti sul piano delle fonti: la carenza di archivi specificamente dedicati, aspetto sul quale ci si soffermerà più diffusamente nelle pagine successive, ostacola ricerche storiche approfondite e sistematiche (Teja 2018a, 9). A ciò si aggiunge una tendenza della storiografia sportiva italiana a privilegiare ricostruzioni biografiche di atleti e campioni, spesso di taglio giornalistico, a scapito di analisi più ampie delle dinamiche socio-culturali legate alla pratica sportiva (Valacchi 2011, 464).

Il settore sportivo è stato a lungo trascurato dal punto di vista documentario, risultando spesso marginale nei processi di conservazione archivistica, con conseguente dispersione di fonti preziose. Ciò rende urgente un ripensamento delle pratiche di tutela e la rivalutazione degli archivi sportivi, riconoscendone il valore funzionale, identitario, storico e culturale (Santarelli e Teja 2010, 7). Il fulcro di questa ricerca si colloca proprio in tale prospettiva: ripensare e comprendere la natura degli archivi sportivi nelle loro specificità, mettendone in luce le difficoltà strutturali, conservative e di riconoscimento all'interno della disciplina archivistica. La memoria, in questo senso, assume un ruolo centrale per ogni esperienza collettiva, e le società sportive, soprattutto quelle radicate nel territorio, possono contribuire in modo determinante alla conservazione del proprio patrimonio e alla continuità della propria storia. In assenza di una piena consapevolezza del valore documentario e identitario dello sport, si rischia infatti di perdere il legame con le proprie radici, compromettendo la possibilità stessa di una ricostruzione storica completa e critica del fenomeno sportivo nel tempo.

Il panorama degli archivi sportivi

Come è noto, l'ambito dell'archivistica privata risulta spesso critico e criptico a causa delle tipologie documentarie non "ordinarie" e "fuori dal comune". Tale difficoltà interpretativa affonda le proprie radici nella profonda trasformazione della produzione documentaria avvenuta nel corso del Novecento. Il mutamento di supporti, materiali e linguaggi di registrazione – dalla fotografia al cinema, dalle registrazioni sonore ai supporti magnetici, fino all'informatica e ai documenti nativi digitali – ha generato una progressiva ibridazione degli archivi, che non si configurano più esclusivamente come sedimentazione scritta su supporto cartaceo.

In questo scenario, a titolo meramente esemplificativo, emergono come esempi paradigmatici di archivi "non ordinari" gli archivi d'artista e gli archivi d'impresa, complessi documentari caratterizzati da un'elevata eterogeneità tipologica e materiale la cui analisi richiede competenze spe-

¹ Società Italiana di Storia dello Sport. Cfr. www.storiasport.com.

cifiche e approcci flessibili, ma al contempo consente di ampliare la nozione stessa di archivio, includendo forme visive, sonore e digitali oltre al tradizionale testo scritto.²

In tale quadro si inseriscono anche le criticità proprie degli archivi sportivi, nei quali la memoria è spesso condizionata da una forte componente emotiva, soprattutto quando gli eventi assumono valore simbolico per le comunità di riferimento. Ne deriva una narrazione prevalentemente costruita sul ricordo di dirigenti e atleti, che tende ad esaltare successi, vittorie e celebrazioni, trascurando un'analisi critica dei processi storici e organizzativi. A ciò si aggiunge una tendenza selettiva nella conservazione, che privilegia i documenti percepiti come rilevanti, contribuendo a una trasmissione parziale della memoria.

Ciò viene alimentato anche dalle testimonianze frammentarie reperibili nella stampa, anziché a una strategia sistematica di conservazione dell'identità collettiva. La mancanza di una narrazione documentata e duratura limita la possibilità di sviluppare analisi storiche sistematiche e comparative (Simonelli e Santarelli 2003, V) riducendo la ricostruzione dello sport a episodi isolati e privi di una visione complessiva delle sue dimensioni sociali, culturali e organizzative.

Un ulteriore fattore è la forte dinamicità dei soggetti produttori: società e associazioni sportive tendono frequentemente a nascere, trasformarsi, scindersi o fondersi (Valacchi 2011, 474). Tale mobilità genera criticità significative sul piano archivistico, poiché trasferimenti e discontinuità organizzative aumentano il rischio di dispersione della documentazione, compromettendo la ricostruzione della memoria istituzionale.

In tal senso risulta prezioso il contributo di Isabella Zanni Rosiello, la quale evidenzia come “nell'esaminare i pieni e i vuoti che attraversano la complessiva documentazione archivistica, non si deve dunque pensare che soltanto i primi ci restituiscano spaccati di realtà storiche di tutto rilievo e che i secondi siano indice di realtà su cui non vale la pena indagare” (Zanni Rosiello 2009, 188–89).

In questa prospettiva si inserisce anche la riflessione di Marc Bloch, medievista, il cui approccio risulta tuttavia applicabile anche a questo contesto, che invita a leggere criticamente l'esistenza stessa dei documenti: essi non compaiono in modo casuale o per effetto di una qualche volontà imperscrutabile, bensì la loro presenza o assenza all'interno di un fondo archivistico è sempre riconducibile a fattori umani, e dunque può e deve essere oggetto di analisi. (Bloch 2009, 59; Pittella 2023, 376). Altri fattori da considerare riguardano l'elevato tasso di scomparsa dei soggetti produttori: molte società sportive, nate diversi decenni fa, hanno visto un progressivo declino dell'interesse verso la tutela della documentazione prodotta, una volta venute meno le figure originariamente impegnate nella sua conservazione.

Oltre alle problematichità già richiamate, un ulteriore elemento di criticità relativo ai fondi archivistici sportivi è rappresentato dal fenomeno del collezionismo che comporta lo smembramento degli archivi e la decontestualizzazione dei documenti. Tale fenomeno, non raro negli archivi privati, si riscontra analogamente anche nei già citati archivi d'impresa e d'artista, dove la selezione e l'estrazione di materiali avviene spesso secondo logiche collezionistiche, con conseguente perdita del contesto originario dei documenti. In tali dinamiche, singoli pezzi come fotografie, manifesti, cimeli, tessere associative, programmi di gara, corrispondenza e materiali a stampa vengono spesso estrapolati dal contesto originario e riorganizzati secondo criteri tematici, estetici o di mercato,

² Per una trattazione più estesa sui temi si vedano: (Martorano 2015; 2024; 2025); (Mineo, Pescini, e Rossi 2023); (Leonardi 1993); (Brunetti 2022); (Bonfiglio-Dosio 2011; 2020; 2024).

anziché nel rispetto del vincolo archivistico (Tamblè 2020). In alcuni casi limite, queste pratiche possono richiamare, seppur in senso non clinico, dinamiche riconducibili alla disposofobia,³ ovvero a una tendenza all'accumulo che privilegia il possesso del singolo oggetto rispetto alla conservazione del suo contesto, favorendo ulteriormente la perdita delle relazioni originarie tra i materiali. Tale processo di estrazione e ricollocamento improprio compromette l'integrità dei fondi, altera le relazioni interne tra le serie documentarie e riduce la possibilità di ricostruire in modo rigoroso le funzioni e le attività dei soggetti produttori incidendo negativamente sul valore storico complessivo della documentazione e sulla capacità di condurre studi critici sulle dinamiche associative e socio-culturali dello sport.

A questo fenomeno si affianca, e talvolta si intreccia, una più recente tendenza alla musealizzazione della storia della disciplina sportiva. Nel tentativo di valorizzare il patrimonio storico e identitario di società, federazioni o singoli atleti, si assiste alla creazione di raccolte tematiche e percorsi espositivi che privilegiano l'oggetto emblematico, il documento iconico o il cimelio celebrativo. In questo contesto, materiali eterogenei vengono selezionati, isolati e ricomposti in collezioni costruite a posteriori, talvolta presentate e percepite come "archivi", ma in realtà configurabili come aggregazioni artificiali. Il rischio, sul piano archivistico, è duplice. Da un lato, la logica espositiva e narrativa tende a sovrapporsi alla logica storico-documentaria, fondata sul rispetto della provenienza e dell'ordine originario. Dall'altro, la trasformazione del documento in oggetto museale può accentuarne la dimensione celebrativa e spettacolare, a scapito della sua funzione testimoniale all'interno di un sistema documentario organico. Ne derivano "collezioni travestite da archivi", in cui la perdita del contesto originario rende più difficile distinguere tra sedimentazione documentaria e costruzione commemorativa.

Va inoltre considerato che le società sportive tendono a concentrarsi prevalentemente sul momento presente: tale *modus operandi*, focalizzato sul qui e ora, fa sì che queste realtà finiscano col trascurare sia passato che futuro. I dati relativi alle prestazioni degli atleti vengono infatti raccolti principalmente per esigenze operative immediate e pratiche, senza mirare a una conservazione sistematica o ad una riflessione storica più ampia. La componente storica emerge solo ed esclusivamente in occasione di giubilei, ricorrenze o manifestazioni di rilievo (come i Giochi olimpici), pur sempre nell'ottica di progetti non sistematici e di breve durata (Felice 2013, 94–5).

Nel complesso, il settore sportivo appare caratterizzato da una forte disomogeneità documentaria dovuta fortemente dalla marcata frammentazione istituzionale,⁴ conseguenza anche di una politica sportiva spesso evasiva, che tende a considerare la pratica sportiva come una funzione accessoria, soprattutto sotto il profilo organizzativo. Gli archivi sportivi, tuttavia, rappresentano invece una fonte essenziale per la comprensione della contemporaneità, in quanto conservano la memoria delle attività di soggetti privati e restituiscono le dinamiche sociali e culturali ad esse connesse. Risulta quindi necessaria la loro rivalutazione, sottraendoli a letture frammentarie o episodiche.

³ Per un'analisi più approfondita si rimanda al contributo di (Nicolai 2024).

⁴ L'organizzazione dello sport italiano si struttura principalmente attorno al Comitato Olimpico Nazionale Italiano (CONI). Cfr. www.coni.it. Tale sistema non si configura in una struttura lineare e semplice, ma presenta numerose articolazioni territoriali che contribuiscono a una notevole complessità nella produzione e gestione della documentazione.

Archivi sportivi: definizione e distinzioni

Gli archivi sportivi costituiscono una realtà documentaria recente, nata parallelamente allo sviluppo delle organizzazioni sportive e offrono una testimonianza significativa della società contemporanea attraverso le tracce delle attività sportive. L'interesse per questi archivi è emerso nei primi anni Novanta e si è progressivamente consolidato nel tempo.

Dal punto di vista tipologico, essi appartengono alla categoria degli archivi prodotti da soggetti privati complessi, in particolare dell'associazionismo. Queste associazioni riuniscono persone che, senza fini di lucro, perseguono obiettivi sociali o comunitari nel rispetto dei principi costituzionali, purché le loro attività non abbiano carattere segreto. Lo Stato non esercita di norma un controllo diretto su di esse, interviene solo in caso di sospette irregolarità. Alcune associazioni, per rafforzare la propria legittimità, scelgono di formalizzare la loro esistenza tramite atto costitutivo e statuto registrati da un notaio.⁵ È opportuno indicare anche l'esistenza delle società sportive,⁶ soggetti produttori eterogenei per natura, struttura e finalità, che si distinguono dalle associazioni sportive per la forma giuridica, poiché rientrano tra le società di capitali, come SRL o cooperative, che, pur non avendo scopo di lucro, svolgono attività sportiva dilettantistica.

Si ritiene utile distinguere fra “archivi dello sport” e “archivi per lo sport”, due differenti tipologie archivistiche che esprimono documentazione di natura distinta. I primi raccolgono la documentazione prodotta da organizzazioni che promuovono o praticano attività sportive, comprendendo in senso ampio tutti gli archivi legati al mondo dello sport. In questo contesto, il panorama archivistico risulta relativamente più frammentato e meno strutturato: le organizzazioni sportive, spesso caratterizzate da una debole vigilanza statale, tendono a gestire autonomamente la propria documentazione, senza linee guida sistematiche per la conservazione. Ne consegue una dispersione rilevante dei documenti, acuita dai fenomeni di collezionismo e musealizzazione citati in precedenza. I secondi, invece, generalmente meglio strutturati, appartengono a enti pubblici o privati che gestiscono, controllano e finanziano il settore sportivo; si tratta di documentazione prodotta da uffici statali, enti locali o organismi privati con funzioni di vigilanza, amministrazione e finanziamento del settore sportivo. In questo caso, la documentazione ha carattere più istituzionale: comprende atti relativi alla gestione economica, al finanziamento delle attività, all'elaborazione di politiche sportive e alla regolamentazione delle organizzazioni.

Come accennato precedentemente, la conoscenza degli archivi sportivi però rimane ancora limitata a causa della ridotta attenzione dedicata loro e del persistente pregiudizio archivistico che li considera una documentazione di valore secondario, ostacolandone così il loro riconoscimento, studio e inclusione nei percorsi di tutela propri della disciplina archivistica (Valacchi 2011, 470). A ciò si aggiunge la conservazione discontinua e personale dei documenti che viene operata dai soggetti produttori, spesso presso abitazioni private, compromettendo l'integrità dei fondi e ostacolando

⁵ Tale procedura, tuttavia, non comporta automaticamente l'inserimento dell'associazione nel sistema pubblico: per ottenere il riconoscimento giuridico è necessaria una specifica istanza allo Stato o alla Regione competente. In caso di esito positivo, le associazioni fondate su base personale acquisiscono la qualifica di *ente giuridico* o *ente morale*, mentre quelle costituite su base patrimoniale vengono riconosciute come *fondazioni*.

⁶ Con l'espressione “società sportiva” si intendono sia le grandi realtà professionistiche, spesso legate a gruppi societari di rilievo, sia le piccole società dilettantistiche, radicate sul territorio, il cui obiettivo principale è lo svolgimento di attività sportive a beneficio della comunità locale.

sia una gestione sistematica del patrimonio documentario sia una corretta ricostruzione storica dell'attività dell'ente. Si riscontra frequentemente una confusione tra archivi, collezioni e musei, dovuta a una conoscenza limitata del concetto di *archivio* e del suo valore come insieme organico e unitario di documenti. Questa mancata consapevolezza impedisce di distinguere correttamente tra patrimonio documentario, prodotto in modo naturale dalle attività di un soggetto, e raccolte costruite secondo criteri selettivi o commemorativi. Ne deriva che molti soggetti produttori adottano modalità di conservazione di tipo museale, privilegiando la dimensione simbolica o estetica degli oggetti, a discapito dei principi archivistici di provenienza, integrità e ordine originario.

In passato questi archivi venivano spesso interpretati come semplici raccolte anziché come veri e propri archivi, ciò accadeva perché la loro conservazione dipendeva dalla volontà del soggetto produttore e da una selezione fortemente soggettiva, basata soprattutto sull'utilità immediata dei documenti: i documenti ritenuti "utili" venivano mantenuti, mentre quelli giudicati "inutili" erano destinati alla distruzione. Tale approccio, tuttavia, rischia di trasformare l'archivio in un tributo *ad memoriam* dedicato a singole figure, più che in una memoria collettiva autentica.

Oggi in Italia, l'interesse verso gli archivi sportivi è in costante crescita, come attestano dibattiti, progetti e iniziative mirate alla loro conoscenza e diffusione. Le recenti analisi e descrizioni dei fondi sportivi hanno infatti contribuito ad ampliare la riflessione sulle loro peculiarità e sul loro ruolo nel panorama archivistico contemporaneo.⁷

La varietà dei materiali conservati e dei soggetti coinvolti, che ne hanno determinato la formazione, richiede però una riflessione sul concetto stesso di *archivio*. In alcuni casi risulta più appropriato definire tali aggregati come *collezioni*, poiché spesso contengono oggetti e materiali di natura più museale che documentaria, frutto di una selezione operata dal soggetto produttore, il quale decide consapevolmente cosa conservare e cosa scartare.

Nella maggior parte dei casi, tuttavia, questi aggregati documentari possono essere considerati veri archivi formatisi attraverso un processo spontaneo di sedimentazione. È però fondamentale leggerli alla luce delle caratteristiche degli archivi contemporanei: realtà dinamiche in continua trasformazione, che riflettono la complessità dei contesti sociali e culturali in cui si sviluppano. Ne deriva un insieme organico di documenti dotato di coerenza interna capace di restituire una memoria strutturata delle attività e della storia associativa.⁸

⁷ Si vedano il convegno *Le sudate carte. Tavola rotonda sugli archivi storici dello sport* del 1994 svoltosi a Roma a cui fece seguito nel 1998 il convegno *Sport: archivi e memorie* che si tenne a Fermo e Porto San Giorgio. Sulla spinta della Società Italiana di Storia dello Sport e della Soprintendenza archivistica per il Lazio, si sono avuti altri momenti di incontro quali il seminario di Tor Vergata sullo sport negli archivi del 2005 oppure il convegno organizzato dalla SISS nel 2016 a Bologna sempre sulla stessa tematica. Il più recente convegno intitolato *Lo sport e i suoi archivi. Produzione, uso e conservazione* svoltosi a novembre 2023 presso l'Università della Tuscia a Viterbo, ha rappresentato un momento significativo di confronto e dibattito sul tema degli archivi sportivi. L'evento ha avuto l'obiettivo di ampliare la concezione tradizionale dell'archivio sportivo, contrastando il rischio di una sua riduzione a mera "musealizzazione".

⁸ Occorre però riflettere su come spesso l'archivio, non presenti effettivamente quei caratteri di naturalezza e spontaneità che gli si è soliti attribuire: si può parlare di *archivio improprio*, ovvero di una configurazione documentaria in cui il vincolo originario tra i documenti risulta assente o non applicabile all'intero complesso archivistico. Tuttavia, adottando una prospettiva che tenga conto non solo dell'esistenza del vincolo, ma anche delle modalità di formazione dell'archivio, è possibile ampliare il concetto stesso di archivio. In tali circostanze, occorre riconoscere l'intervento consapevole del soggetto produttore, la cui azione volontaria ha inciso sulla struttura e sull'organizzazione del materiale documentario. Si vedano: (Romiti 1993, 104; Navarrini 2005, 28).

La riflessione sulla loro natura mette in luce un quadro articolato e complesso, in cui la varietà della documentazione conservata rappresenta un elemento tipico di gran parte degli archivi contemporanei. Le diverse ricerche condotte sul tema evidenziano come la maggior parte degli archivi dello sport conservi soprattutto documentazione relativa all'organizzazione e alla gestione delle associazioni e società sportive. Tra le tipologie documentarie più ricorrenti si trovano gli statuti e le carte di costituzione, la documentazione amministrativa e gestionale ordinaria (contratti, verbali dei consigli direttivi e delle assemblee dei soci, proposte e rapporti di lavoro, comunicati, registri contabili),⁹ nonché i documenti relativi all'acquisto di attrezzature e alla progettazione, in fase preliminare o esecutiva, di impianti sportivi o altre strutture dedicate. Vi rientrano inoltre materiali concernenti la gestione dei rapporti con soggetti esterni, come convenzioni con strutture sportive, stabilimenti per l'alloggio durante attività estive o trasferte per le competizioni. Accanto a questi materiali, è spesso presente una documentazione specificamente dedicata agli atleti, comprendente schede anagrafiche e di iscrizione, registri delle prestazioni sportive, tesserini e certificati medici. Si tratta di un insieme eterogeneo per forma, ma omogeneo per funzione, in quanto strettamente connesso all'attività del soggetto produttore. In esso rientrano, infatti, tutti i documenti generati nel processo di costituzione e di sviluppo delle associazioni sportive.

Gli archivi dello sport, analogamente a molti altri archivi contemporanei, possono essere definiti *archivi multitipologici* o anche “specchi di contesti complessi e composti da elementi diversi” (Brunetti 2018, 45)¹⁰ poiché caratterizzati dalla compresenza di materiali eterogenei per forma e supporto. Vi si trovano documenti analogici, raccolte fotografiche, rassegne stampa, inclusi ritagli di giornale, manifesti pubblicitari, locandine, libretti di eventi, corrispondenza, video e oggettistica promozionale.¹¹ Quando disponibili, queste fonti costituiscono uno strumento fondamentale per ricostruire il contesto di operatività dell'associazione, delinearne la rete relazionale e documentarne l'evoluzione storica.

Il grado di ordine o disordine, nonché la presenza o l'assenza di determinati materiali, dipendono dal livello di attenzione che i soggetti produttori dedicano alla conservazione della propria documentazione. Spesso questi materiali vengono custoditi principalmente come strumenti di uso corrente e non come memoria storica, a meno che non rappresentino eventi significativi, come una vittoria sportiva, e vengano quindi mantenuti intenzionalmente. Ne risulta una documentazione generalmente poco strutturata, raccolta, o più propriamente accumulata secondo criteri legati agli interessi, alle attività e alle relazioni che le associazioni intrattengono con il loro contesto esterno.

⁹ L'introduzione delle nuove tecnologie ha ampliato la natura della documentazione archivistica, che non si limita più ai tradizionali supporti materiali, ma include anche risorse di carattere tecnico-contabile prodotte e conservate in formato digitale.

¹⁰ Per un'analisi più approfondita sull'archivio multitipologico si vedano anche: (Brunetti 2020; 2023).

¹¹ Nelle associazioni a carattere familiare si riscontrano spesso archivi personali o familiari, comprendenti lettere, diari, documenti privati e materiali legati alla gestione quotidiana dell'associazione, inclusi atti di proprietà, ricordi familiari e fotografie di eventi sportivi con la partecipazione dei membri della famiglia.

Il censimento

L'analisi che segue presenta i risultati dell'indagine condotta sugli archivi dello sport della provincia di Firenze, elaborati a partire dalle schede di rilevazione predisposte nell'ambito della tesi di Laurea Magistrale della scrivente *Archivi che non sanno di essere archivi. Censimento sugli archivi dello sport nella provincia di Firenze, Università degli Studi di Firenze, 2024*.¹² L'indagine, finalizzata a verificare la presenza, l'assenza e le caratteristiche di questa tipologia archivistica, ha interessato l'intero territorio provinciale, coinvolgendo complessivamente 1.198 associazioni sportive.¹³

Il lavoro di base prende avvio dal *Censimento delle fonti e degli archivi dello sport toscano* del 2014¹⁴ promosso dal Centro di Documentazione della ASSI Giglio Rosso di Firenze¹⁵ e finanziato dalla Regione Toscana, il quale aveva come obiettivo la mappatura degli archivi delle associazioni costituite prima del 1960.

Grazie a tale progetto, la Toscana si è distinta come una delle prime regioni italiane ad aver sostenuto un intervento sistematico di tutela, conservazione e valorizzazione delle testimonianze storiche del mondo sportivo. Partendo da questi risultati, la ricerca qui condotta si è posta l'obiettivo di aggiornare e ampliare i dati raccolti, estendendo l'analisi a tutto il territorio provinciale e includendo anche associazioni più recenti, al fine di offrire una fotografia più completa e aggiornata.

Il censimento del 2014 mirava a identificare e valutare le associazioni sportive in base alla loro cronologia di fondazione, al rilievo storico e alla consistenza dei loro fondi, considerando inoltre lo stato di ordinamento, conservazione, consultabilità e accessibilità. Le schede descrittive venivano integrate con le informazioni raccolte sintetizzate tramite un sistema di valutazione a stelle, con punteggio massimo di tre.¹⁶ Tuttavia, tale metodo presenta limiti significativi: i punteggi risultano spesso ambigui e poco trasparenti, mancando di criteri chiari per definire il rilievo storico, la consistenza del fondo o il grado di accessibilità. Ciò riduce l'efficacia dello strumento nel fornire una valutazione oggettiva e approfondita del valore archivistico e storico delle associazioni.

Benché l'iniziativa condotta dal Centro Studi e Documentazione ASSI Giglio Rosso abbia riscosso notevole interesse a livello nazionale, essa rivela tuttavia non poche lacune in termini di rigore e precisione scientifica nel trattamento del dato archivistico: il sistema di valutazione a stelle, infatti, non rende chiara né immediata la descrizione dei fondi archivistici.

Per questo motivo, la presente ricerca svolta dalla sottoscritta si è proposta non solo di approfondire e integrare tale censimento, rilevando la semplice presenza o assenza di archivi, ma ha anche analizzato anche le dinamiche di formazione, selezione e conservazione dei materiali, evidenziando lacune, decontestualizzazioni e pratiche selettive che influenzano la trasmissione della memoria documentaria.

Lo studio è iniziato con l'identificazione dei soggetti del precedente censimento, aggiornan-

¹² La rilevazione è stata effettuata dal 23 gennaio 2024 al 27 agosto 2024.

¹³ Per la visualizzazione complessiva delle diverse fasi di lavoro si rimanda alla Tesi di Laurea.

¹⁴ Parliamo principalmente di società storiche, se non centenarie. *Censimento delle fonti e degli archivi dello sport toscano* (aggiornamento 2014), www.regione.toscana.it/-/censimento-delle-fonti-e-degli-archivi-dello-sport-toscano-aggiornamento-2014.

¹⁵ Cfr: *Centro studi Assi Giglio Rosso*, www.assigigliorosso.it/centro-studi/.

¹⁶ È stato precisato che, nel 90% dei casi, l'attribuzione del valore minimo (una stella) deriva dal mancato invio della scheda di censimento da parte dell'associazione, rendendo il dato fittizio e non coerente con la realtà.

do i contatti e verificando l'esistenza delle associazioni. Sono emerse criticità legate alla scomparsa di alcune società, per motivi economici o fusioni, e alla mancata risposta di molte realtà. Per ampliare l'indagine, sono stati consultati i tabulati del Registro Nazionale del CONI, rivelatisi però imprecisi, richiedendo ulteriori verifiche. L'indagine è stata quindi estesa tramite i siti istituzionali dei comuni, motori di ricerca, social network e segnalazioni provenienti da operatori del mondo sportivo fiorentino.

La ricerca ha identificato 1.198 associazioni conformi ai criteri d'interesse; a ciascuna di esse è stata inviata una scheda di rilevazione articolata in sette sezioni:

1. dati anagrafici dell'Associazione;
2. storia dell'Associazione;
3. altre informazioni storiche riassuntive;
4. l'esistenza o meno di ricerche edite o inedite sulla storia dell'Associazione;
5. rilevazione dell'archivio e indicazione in caso positivo degli estremi cronologici;
6. eventuali danni causati all'archivio, se presente, dall'alluvione del 2-3 novembre 2023;
7. dati anagrafici dell'Archivio.

Data la scarsa familiarità con il tema degli archivi sportivi, la scheda è stata redatta con linguaggio chiaro e accessibile per garantire una migliore riuscita dell'indagine.

Viene illustrato in seguito l'esempio della scheda di rilevazione:

Dati anagrafici dell'Associazione		Rilevazione dell'archivio: è presente l'archivio? (se sì, indicare gli estremi cronologici generali)	Sì ☐ No ☐ Estremi cronologici generali:
Storia dell'Associazione			
Altre informazioni storiche: quadro riassuntivo	Anno di costituzione: Attività/ Tipologia sportiva/ Categoria: Affiliazione:	Alluvione 2-3 novembre 2023: se l'archivio è presente ha subito danni a causa dell'alluvione?	Sì ☐ No ☐
Esistono ricerche inedite o pubblicazioni sulla storia dell'Associazione? (se sì, specificarle)	Sì ☐ No ☐	Dati anagrafici dell'Archivio	Ente conservatore: Responsabili dell'Archivio: Sede dell'archivio e tipologia di locali:

Tabella 1. Scheda di rilevazione per censimento.

La scheda è strutturata principalmente da quesiti a risposta chiusa o breve, affiancati da alcune domande aperte. Le domande chiuse agevolano la compilazione, ma quasi tutte consentono di aggiungere osservazioni o approfondimenti.

La prima sezione raccoglie i dati anagrafici dell'associazione (denominazione, sede, contatti, e-mail e sito web); la seconda è dedicata alla sua storia.¹⁷

La terza invece riguarda aspetti tecnici (anno di fondazione, attività, disciplina, categoria e affi-

¹⁷ In questo ambito, alcune realtà hanno fornito una ricostruzione dettagliata del proprio percorso storico, altre si sono limitate a informazioni di carattere generale.

liazione) ed è collegata alla successiva, che indaga su eventuali ricerche, edite o inedite, inerenti la storia dell'associazione.

Il quinto campo, centrale per l'indagine, riguarda la presenza dell'archivio, di cui si indicano gli estremi cronologici generali in caso di risposta positiva. Data la natura esplorativa della ricerca, non è stata condotta una verifica approfondita sulla consistenza dei fondi, salvo nei casi in cui le associazioni abbiano offerto spontaneamente collaborazione.¹⁸

Per quanto riguarda l'integrità e la consistenza degli archivi delle associazioni sportive fiorentine, il sesto campo rileva eventuali danni agli archivi delle associazioni sportive fiorentine causati dall'alluvione del 2-3 novembre 2023, che ha interessato in particolare la città di Campi Bisenzio prendendo spunto da quella del 1966 che colpì Firenze e i suoi beni culturali. Il settimo campo raccoglie i dati anagrafici dell'archivio (se presente), includendo ente conservatore, responsabile, sede e tipologia dei locali di conservazione.¹⁹

La sintesi finale dei dati, aggiornata al 27 agosto 2024, riporta per ciascun comune le associazioni contattate e la loro incidenza sul totale (1.198), le e-mail risultate inesistenti (7,76% del totale delle e-mail contattate, considerate come mancata risposta) e le associazioni già presenti nel censimento del 2014, con le corrispondenti risposte raccolte nell'ambito di questa indagine. Viene inoltre indicato il numero totale di risposte ricevute, distinguendo tra risposte negative, non collaborative, associazioni cessate²⁰ e risposte positive.²¹ Per queste ultime, l'ultima sezione evidenzia quali associazioni possiedono un archivio. Nell'ultima colonna sono segnalate due associazioni che hanno subito una perdita parziale o totale dell'archivio.²²

¹⁸ Alcune associazioni non si sono limitate a risposte sintetiche, ma hanno fornito descrizioni dettagliate del proprio patrimonio documentario. In un caso è stata persino segnalata la presenza di un archivio corrente e di deposito, elemento che testimonia una speranza nella crescita di consapevolezza verso la dimensione archivistica.

¹⁹ Appare evidente che, qualora alla domanda "È presente l'archivio?" venga fornita una risposta negativa, la scheda si considererà conclusa e non includerà l'ultima sezione prevista.

²⁰ I dati sulla "cessata attività" distinguono le associazioni che hanno chiuso definitivamente da quelle che hanno trasformato la loro attività in esercizi commerciali, informazione quest'ultima ricavata tramite ricerche online sui nomi e gli indirizzi originari delle associazioni.

²¹ Si parla di "risposta positiva" nel caso in cui si sia ricevuta una scheda di rilevazione debitamente compilata.

²² Inclusi nell'assenza o presenza dell'archivio.

Comune	Associazioni contattate	%	Mai in esistenza	% Mai inesistenti su Mai contattate	associazioni contattate presenti Censimento 2014	Risposte censimento	Risposte totali	Risposte negative/non collaborativi	Risposte positive/schede	Cessata attività	Archivio si	Archivio so	Dicrete
Bagno a Ripoli	32	2,67%	1	3,13%	3		6	3	2	1	1	1	
Barberino di Mugello	27	2,25%	4	14,81%	1		1		1		1		
Borgo San Lorenzo	36	3,01%		0,00%	3		1		1		1		
Calenzano	32	2,67%	4	12,50%	1		2		2		1	1	
Campi Bisenzio	34	2,84%	4	11,76%	1		1		1		1		IN PARTE
Capraia e Limite	7	0,58%		0,00%	2		0						
Castelfiorentino	19	1,59%	4	21,05%	4		1		1			1	
Cerreto Guidi	12	1,00%		0,00%	1		0						
Certaldo	17	1,42%	3	17,65%	1		1		1		1		
Dicomano	4	0,33%		0,00%	1		0						
Empoli	71	5,93%	4	5,63%	6		2		2		1	1	
Fiesole	17	1,42%	1	5,88%	2	1	3		3		1	2	
Figline e Incisa Valdarno	29	2,42%	1	3,45%	1		2		2			2	
Firenze	419	34,97%	20	4,77%	44	4	35	10	24	1	9	15	1
Firenzuola	9	0,75%	1	11,11%			1		1		1		
Fucecchio	34	2,84%	2	5,88%	2		1		1		1		
Gambassi Terme	10	0,83%	2	20,00%	1		1		1		1		
Greve in Chianti	10	0,83%		0,00%	1		0						
Impruneta	22	1,84%	5	22,73%	1		2	1	1		1		
Lastra a Signa	36	3,01%	5	13,89%	3		0						
Londa	3	0,25%		0,00%	1	1	2		2		2		
Marradi	1	0,08%		0,00%			0						
Montaione	5	0,42%	3	60,00%	1		0						
Montelupo Fiorentino	28	2,34%	1	3,57%	1		0						
Montespertoli	7	0,58%	1	14,29%	1		0						
Palazzuolo sul Senio	2	0,17%		0,00%			0						
Pelago	16	1,34%	1	6,25%			0						
Pontassieve	26	2,17%	1	3,85%	2		1		1			1	
Reggello	18	1,50%		0,00%	1		1		1			1	
Rignano sull'Arno	9	0,75%		0,00%	1		0						
Rufina	3	0,25%		0,00%	1		2	1	1			1	
San Casciano in Val di Pesa	31	2,59%	5	16,13%	2	1	1		1		1		
San Godenzo	2	0,17%	2	100,00%			0						
Scandicci	33	2,75%	2	6,06%	3		2		2		2		
Scarperia e San Piero	27	2,25%	6	22,22%	3		2		2		1	1	
Sesto Fiorentino	58	4,84%	7	12,07%	4	1	2		2		2		
Signa	14	1,17%		0,00%	2	1	1		1		1		
Tavarnelle Val di Pesa	8	0,67%	1	12,50%	1		0						
Vaglia	4	0,33%		0,00%			0						
Vicchio	11	0,92%	2	18,18%			0						
Vinci	15	1,25%		0,00%			0						
totale	1198	100,00%	93	7,76%	103	9	74	15	57	2	30	27	1

Tabella 2. Risultato del censimento.

Definiti i dati e le ipotesi, si è proceduto all'analisi dei risultati, esaminando le caratteristiche dei rispondenti e le informazioni correlate.

Come mostra la tabella, le risposte totali sono 74, un numero alquanto basso rispetto al numero delle associazioni contattate (pari al 6,18%).

Comune	Risposte totali	Risposte negative/non collaborativi	Risposte positive/ schede	Cessata attività
Bagno a Ripoli	6	3	2	1
Barberino di Mugello	1		1	
Borgo San Lorenzo	1		1	
Calenzano	2		2	
Campi Bisenzio	1		1	
Capraia e Limite	0			
Castelfiorentino	1		1	
Cerreto Guidi	0			
Certaldo	1		1	
Dicomano	0			
Empoli	2		2	
Fiesole	3		3	
Figline e Incisa Valdarno	2		2	
Firenze	35	10	24	1
Firenzuola	1		1	
Fucecchio	1		1	
Gambassi Terme	1		1	
Greve in Chianti	0			
Impruneta	2	1	1	
Lastra a Signa	0			
Londa	2		2	
Marradi	0			
Montalone	0			
Montelupo Fiorentino	0			
Montespertoli	0			
Palazzuolo sul Senio	0			
Pelago	0			
Pontassieve	1		1	
Reggello	1		1	
Rignano sull'Arno	0			
Rufina	2	1	1	
San Casciano in Val di Pesa	1		1	
San Godenzo	0			
Scandicci	2		2	
Scarperia e San Piero	2		2	
Sesto Fiorentino	2		2	
Signa	1		1	
Tavarnelle Val di Pesa	0			
Vaglia	0			
Vicchio	0			
Vinci	0			
totale	74	15	57	2

Tabella 3. Risposte pervenute dalle associazioni contattate.

Dall'analisi delle risposte pervenute, si evidenzia che 15 associazioni non hanno partecipato alla ricerca, 57 hanno restituito la scheda di rilevazione e 2 hanno comunicato di aver cessato la propria attività.

Si rileva inoltre che in 17 comuni su 42, pari al 40,48%, non è stata registrata alcuna risposta. Focalizzandosi sull'obiettivo principale della ricerca sono state oggetto di analisi le 57 schede compilate, corrispondenti al 77,03% delle 74 risposte totali ricevute, rappresentando quindi il nucleo centrale dei dati utilizzabili per l'indagine.

I dati, che verranno ora analizzati, riguardano la presenza, l'assenza o la distruzione dell'archivio. Oltre la metà delle associazioni (30 su 57, corrispondente al 52,63%) possiede un archivio, mentre il 47,37% ha dichiarato di non avere documentazione archivistica.

Comune	Archivio si	Archivio no	Di cui distrutto/i
Bagno a Ripoli	1	1	
Barberino di Mugello	1		
Borgo San Lorenzo	1		
Calenzano	1	1	
Campi Bisenzio	1		IN PARTE
Capraia e Limite			
Castelfiorentino		1	
Cerreto Guidi			
Certaldo	1		
Dicomano			
Empoli	1	1	
Fiesole	1	2	
Figline e Incisa Valdarno		2	
Firenze	9	15	1
Firenzuola	1		
Fucecchio	1		
Gambassi Terme	1		
Greve in Chianti			
Impruneta	1		
Lastra a Signa			
Londa	2		
Marradi			
Montaione			
Montelupo Fiorentino			
Montespertoli			
Palazzuolo sul Senio			
Pelago			
Pontassieve		1	
Reggello		1	
Rignano sull'Arno			
Rufina		1	
San Casciano in Val di Pesa	1		
San Godenzo			
Scandicci	2		
Scarperia e San Piero	1	1	
Sesto Fiorentino	2		
Signa	1		
Tavarnelle Val di Pesa			
Vaglia			
Vicchio			
Vinci			
totale	30	27	1

Tabella 4. Dati relativi all'archivio.

Per quanto riguarda il possesso dell'archivio, il dato più significativo emerge dal comune di Firenze: delle 24 schede ricevute, 15 associazioni (62,50%) hanno segnalato l'assenza di un archivio, una percentuale elevata riconducibile sia all'elevata popolazione residente sia all'alta densità abitativa. Negli altri comuni, invece, il rapporto tra archivi presenti e assenti tende a mantenersi in equilibrio, mediamente pari a 1:1. Da rilevare, inoltre, che due associazioni hanno segnalato la parziale o totale distruzione del proprio archivio.

Il censimento realizzato offre un quadro piuttosto dettagliato della realtà storica e archivistica delle associazioni nella provincia di Firenze. I risultati ottenuti possono essere considerati complessivamente soddisfacenti, tenendo conto della varietà delle variabili analizzate e della complessità del fenomeno indagato. Nel complesso, le informazioni relative al possesso o meno di archivi da parte

delle associazioni confermano tendenze già riscontrate nel contesto sportivo, quali la limitata attenzione verso la conservazione documentaria, la scarsa sensibilità verso il valore dell'archivio e la ridotta consapevolezza della sua funzione nella costruzione e gestione della memoria istituzionale. Occorre evidenziare che l'essere umano è influenzato non solo dall'ambiente sociale circostante, ma anche dal proprio stato emotivo, risulterebbe pertanto interessante esplorare la componente psicologica alla base della mancata conservazione dei documenti e della scarsa valorizzazione degli archivi. Pur auspicando che gli operatori delle singole associazioni siano dotati di una sensibilità personale in materia, tali pratiche non possono essere affidate alla sola iniziativa individuale: è necessario, piuttosto, un chiaro indirizzo e una presa di posizione a livello apicale, in grado di orientare in modo strutturale le politiche di gestione e tutela documentaria. Parallelamente, analizzare l'impatto della ricerca sulle associazioni potrebbe offrire un indicatore prezioso del potenziale effetto di un'esperienza archivistica, mettendo in luce eventuali cambiamenti nella percezione e nell'approccio alla gestione documentaria.

I dati raccolti evidenziano infine l'urgenza di promuovere attività di formazione e diffusione delle conoscenze archivistiche, in particolare presso le associazioni che non riconoscono pienamente il valore dell'archivio e il suo ruolo nella società contemporanea.

Conclusione

L'indagine sugli archivi sportivi ha evidenziato il ruolo centrale dello sport come componente significativa del patrimonio culturale, contribuendo alla definizione dell'identità sociale e culturale dei contesti in cui si sviluppa. L'analisi di tali archivi richiede l'esame di molteplici variabili complesse, competenze specialistiche e un costante dialogo tra tutti i soggetti coinvolti nella loro formazione, gestione e conservazione. Nonostante difficoltà e disinteresse dei produttori o della comunità archivistica, lo studio ha permesso di individuare criticità e formulare indicazioni utili per la tutela e valorizzazione della documentazione sportiva.

Dal punto di vista archivistico, la situazione degli archivi sportivi risulta complessa e poco incoraggiante. La gestione e la conservazione della documentazione sono spesso trascurate: gran parte dei materiali viene eliminata secondo le scadenze normative, mentre la preservazione di alcuni documenti dipende più da interessi personali o dalla passione per l'attività che da un reale impegno civico. La trascuratezza è favorita da carenza di spazi adeguati, mancanza di personale formato e dalla percezione diffusa che gran parte dei documenti perda valore una volta esaurita la loro funzione.

Il problema non riguarda solo le associazioni cessate, la cui documentazione è spesso perduta, ma anche le realtà attive, dove permane una scarsa cultura della conservazione.²³ In questi contesti il rischio di dispersione delle fonti è particolarmente elevato soprattutto per i documenti più recenti: se le carte storiche godono di maggiore tutela, quelle di produzione contemporanea vengono frequentemente trascurate evidenziando una sensibilità limitata verso la conservazione sistematica (Valacchi 2011, 479).

²³ Criticità gestionali e descrittive emergono anche negli archivi di società sportive professionistiche, influenzate talvolta da sponsor o logiche di marketing che distorcono la memoria storica.

Per garantire la tutela di questa documentazione è necessario promuovere sensibilizzazione e interventi mirati di conservazione e valorizzazione, realizzati in collaborazione con le associazioni, per proteggerli dall'incuria e assicurarne la fruibilità nel tempo. La trasmissione di questo patrimonio alle generazioni future è fondamentale, poiché senza una gestione consapevole rischia di andare perduto, ricordando che "il futuro altro non è che un presente diverso" (Valacchi 2021, 212).

Un problema rilevante riguarda la difficoltà di reperire archivi completi e correttamente organizzati. Se le associazioni sviluppessero maggiore consapevolezza dell'importanza di un archivio ordinato, contribuirebbero a consolidare e preservare la propria storia come sottolineato Federico Valacchi: "trascurare gli archivi significa trascurare noi stessi" (Valacchi 2023, 21). Un'eccezione significativa riguarda alcune associazioni sportive con *status* di ente pubblico, come le Sezioni del Club Alpino Italiano. Queste realtà si distinguono per una gestione documentale più strutturata e consapevole rispetto alla media delle associazioni no profit o sportive. Ciò può essere attribuito a diversi fattori: innanzitutto, la loro condizione di ente pubblico comporta obblighi normativi più stringenti in termini di archiviazione e trasparenza amministrativa. In secondo luogo, le Sezioni del Club Alpino Italiano hanno sviluppato nel tempo una cultura interna orientata alla conservazione della memoria storica, sia per motivi istituzionali sia per l'importanza attribuita alla tutela del patrimonio culturale e delle esperienze escursionistiche.

Va inoltre osservato che molte associazioni tendono a interpretare l'archivio esclusivamente come memoria storica, identificandolo con il concetto di archivio storico. Tale visione conduce spesso a valutazioni distorte della documentazione: in alcuni casi, infatti, le stesse associazioni ritengono di non possedere alcun archivio.

Nella maggior parte delle associazioni sportive emerge una difficoltà nell'applicare pratiche corrette di gestione archivistica, influenzando la conservazione dei documenti fin dalla loro produzione. I materiali prodotti nell'attività corrente tendono ad essere trascurati una volta esaurita la loro funzione, eccetto quelli ritenuti particolarmente significativi per la memoria storica dell'associazione. È importante sottolineare che le dimensioni dell'associazione non garantiscono una migliore organizzazione archivistica: alcune realtà piccole o di recente costituzione mostrano una gestione più accurata rispetto ad associazioni più grandi, evidenziando come la qualità della conservazione dipenda più dalla consapevolezza e dall'attenzione dei responsabili che dalle risorse disponibili.

La ricerca mette in luce una diffusa scarsa consapevolezza del concetto di archivio e del suo valore, sia come strumento di gestione organizzativa sia come patrimonio informativo e storico. In molte associazioni emerge diffidenza, legata a timori sulla gestione di documentazione sensibile o a possibili implicazioni fiscali, evidenziando la necessità di azioni formative capaci di promuovere una gestione consapevole e sistematica dei documenti, oltre la sola dimensione storica, rafforzando memoria istituzionale e trasparenza delle attività associative.

Un esito significativo del censimento è stato l'incremento della consapevolezza tra i detentori di archivi sull'importanza della loro tutela e conservazione. Questo riconoscimento non riguarda solo il valore storico dei documenti, ma anche il ruolo strategico di un archivio ben organizzato nella gestione e nelle attività associative. In molti casi, l'indagine ha stimolato riflessioni sulle pratiche di conservazione esistenti e ha spinto alcune associazioni a intraprendere interventi concreti di riordino e valorizzazione, rafforzando il senso di responsabilità verso la memoria collettiva.

L'analisi conferma che gli archivi sportivi costituiscono una fenomenologia complessa, caratterizzata da diverse modalità di produzione, da una pluralità di soggetti coinvolti e da differenti forme di organizzazione e conservazione della documentazione.

Il dibattito sulla loro natura, gestione e utilizzo resta aperto e stimolante, sia per il settore archivistico sia per il mondo dello sport. Negli ultimi anni si è osservata una crescente attenzione verso questi archivi e una maggiore consapevolezza del loro valore documentario, storico e culturale. Il confronto tra archivisti, studiosi e operatori sportivi può favorire la creazione di un contesto culturale consolidato, in cui gli archivi sportivi non siano soltanto depositi di documenti, ma diventino vere e proprie risorse capaci di arricchirne la conoscenza.

Particolare rilevanza assume anche il “non dato”: assenze, mancate risposte o scomparsa di documentazione non devono essere interpretate come vuoti irrilevanti, ma come indicatori indiretti di fenomeni più ampi, quali difficoltà economiche, processi di ristrutturazione o variazioni nell'interesse e nella partecipazione al settore sportivo.

In questa prospettiva, anche l'assenza di dati contribuisce a delineare il contesto sociale, economico e organizzativo in cui operano delle associazioni, offrendo informazioni preziose sulla gestione, la consapevolezza archivistica e la valorizzazione della memoria sportiva. Complessivamente, l'analisi degli archivi sportivi, considerando sia la documentazione conservata sia quella potenzialmente perduta, consente di ottenere un quadro realistico della realtà esaminata e fornisce basi solide per interventi futuri volti alla tutela, conservazione e valorizzazione di un patrimonio spesso trascurato ma di grande valore culturale.

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Cultural heritage objects in lack of anchoring communities. An unfinished reflection on a relational ethics of care*

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ABSTRACT

The return of cultural artefacts taken during the colonial era seems to be a matter of course in our time. But what happens if the communities to whom these objects should be returned have for long ceased to exist and their successors are involved in a civil war? At the example of manuscripts taken from Ethiopia after the Battle of Maqdala, this contribution discusses ethical, legal and social issues (ELSI) surrounding such cultural heritage objects and calls into question the premises of recent calls for their return. This article discusses the history of these manuscripts and the case of missing “anchoring communities”, reconsiders provisional alternatives such as digitisation and provision in open access, and argues in the sense of an ethics of care. Consequently, an individual, rights-based approach to archival ethics is set aside and the care for the object itself is temporarily prioritised over the physical repatriation of the cultural heritage item.

KEYWORDS

Restitution; ELS issues; Digitisation; Open access; Feminist ethics.

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Introduction

Restitution is a noble ideal that should always be strived for. However, each individual case must be considered carefully. One of the often-cited cases when it comes to the question of colonial theft, looting of cultural property, and the protection or restitution of cultural heritage in or after armed conflicts is the “Battle of Maqdala”. It took place in 1868 and is also known as the endpoint of the “British Expedition to Abyssinia” (Matthies 2012; Patrizio Gunning and Challis 2023). Similar to the British punitive Benin Expedition of 1897, the aim of the battle of Maqdala was to free British hostages imprisoned by Ethiopian Emperor Tewodros II, and to punish him. On April 13th, 1868, British and Indian troops first bombarded the fortress of Maqdala, which lies on a table mount, then stormed, destroyed, pillaged and burned it down. Tewodros II committed suicide before the foreign troops had entered the inside of the stronghold. “Fifteen elephants and nearly 200 mules” (Stanley 1874, 467) were needed to transport the booty, amongst it shields, weapons, clothes, manacles, royal regalia, dresses, shawls, jewelry, or sacred artefacts like Ethiopian orthodox altar tablets (‘tabot’ in Amharic) and discs, as well as more than 1,000 manuscripts (Pankhurst 1973, 40) and other artefacts.

To this day, the vast majority of this movable cultural heritage can be found in European cultural heritage institutions, auction houses, and in the ownership of descendants of the participants of the punitive expedition. Numerous British cultural heritage institutions hold artefacts that belong to the Maqdala booty, amongst them the British Library, British Museum, Victoria & Albert Museum, London, The King’s Own Royal Regiment Museum, Lancaster, National Museums of Scotland, or the National Army Museum, London.¹ More specifically, an estimated number of 400 manuscripts has been brought to Europe. The vast majority of them can now be found in the British Library; a catalogue published in 1877 lists 350 of them (Wright 1877). Further manuscripts can be found e.g. in Cambridge University Library (13 manuscripts); The Bodleian Library, Oxford (11); Royal Collection (6); The Wellcome Collection, London (6); Victoria & Albert Museum (4); Edinburgh University Library (4); John Rylands Museum, Manchester (4); National Library of Scotland, Edinburgh (2); National Museums of Scotland (2). Beyond the United Kingdom, manuscripts can be found in Princeton University Library, New Jersey, USA (3), Chester Beatty Library, Dublin, Ireland (3); Trinity College Dublin, Ireland (3); Bibliothèque Nationale de France, Paris, France (2); Staatsbibliothek zu Berlin, Berlin, Germany (2). Each of the following institutions holds a single manuscript: Austrian National Library, The Afrika Museum, Berg en Dal, Netherlands; The Schøyen Collection, Oslo, Norway; UCLA Library, Los Angeles, USA; The Smithsonian Institution, Washington DC, USA. Individual manuscripts have been sold at auctions and continue to resurface if they are being digitised by a library, archive or museum. One example is a manuscript with Ethiopian homilies that is now held by the Special Collections & University Archives at the University of Oregon.²

Two recent articles, published in August and October 2024, debate the question of restitution of the dispersed Maqdala collection. The first one is entitled “Degodding Maqdala” and was written

¹ The currently best up to date catalogue of these artefacts can be found on the website accompanying Andrew Heavens’ publication; see <https://www.theprinceandtheplunder.com/>.

² Compare here <https://www.theprinceandtheplunder.com/2024/02/26/a-17th-century-manuscript-taken-to-france-then-new-york/> and <https://oregondigital.org/concern/generics/bv73c806d>.

by two scholars (Admassu and Derillo 2024); the second one, “Neocolonialism: buying back stolen items”,³ was published by Ethiopian journalist Maya Misikir. These recent publications open up the possibility to discuss a range of ethical, legal and social aspects related to restitution and access to digital cultural heritage at the example of the Maqdala collection.

The broader intellectual context of this article is formed by the international debate on the restitution of cultural objects, especially with regard to African collections in European cultural heritage institutions. For decades, this debate mainly centered around legal aspects. Modern international treaties and conventions are based on the notion of property and protect cultural heritage from the dates onwards when they have taken effect. However, they do not prove to be useful for bygone times like the colonial era. Court cases that aim at the restitution of looted or illegally exported cultural objects from formerly colonised countries have to refer to national laws or diverse legal systems, often leading to unpredictable and unsatisfactory proceedings (Labadie 2021). Within the past decade, the debate has shifted and stressed the cultural plunder of heritage rather than just the legal issues focusing on property (Robertson 2019; Fincham 2013). Thus, the emphasis of the contemporary debate is more on restorative justice and human rights. Restitution is not merely treated as a transfer of property, but reframed as an ethical issue and as a critical mechanism to redress historical, colonial, and systemic wrongs. A crucial contribution in this respect was the 2018 publication of the report “The Restitution of African Cultural Heritage: Toward a New Relational Ethics” (Sarr and Savoy 2018). It addressed the violent contexts of past acquisition during the colonial era, advocated for reparation, demanded permanent repatriation and called for a “new relational ethics” based on mutual respect. Consequently, it has caused a shift in how museums, governments, and publics talk about provenance, ownership, and historical responsibility (Arts Council England 2023). Alongside with this flip of the ethical consensus, frustration over the ineffectiveness of court proceedings and existing legal frameworks has led to the use of alternative dispute resolution methods like mediation or arbitration facilitating voluntary restitution.

With regard to libraries and archives, a remarkable contribution has been published by Michelle Caswell and Marika Cifor, “From Human Rights to Feminist Ethics: Radical Empathy in the Archives” (Caswell and Cifor 2016). In this article, both authors place archivists into the broader contemporary context. In their view, a cultural heritage object is not exempt from time and space because it is kept in a cultural heritage institution. Rather, they propose an “ethics of care” and demand that the focus of care is on the relationship between these objects and the related communities: “An ethics of care, which we situate here under the larger tent of feminist ethics, stresses the ways people are linked to each other and larger communities through webs of responsibilities” (Caswell and Cifor 2016, 28). Moreover, this relationality implies that archivists have to deal with shifting contexts: “An archival approach based on the feminist ethics of care [...] acknowledges that relationships change over time, that while the record may be fixed, our obligations to it – its creator, its subject, its users, its community – are constantly evolving in ways unforeseen” (Caswell and Cifor 2016, 42). As a consequence, this acknowledgement requires repeated assessments of changing contexts in order to adequately adjust the recommended actions of an ethics of care. As the discussion triggered by the article shows (Caswell and Cifor 2021), the conception of care

³ See <https://sifter.substack.com/p/two-things-you-thought-were-mutually?open=false#%C2%A7neocolonialism-buying-back-stolen-items>.

developed by Caswell and Cifor implies a shift away from an individual, rights-based approach to archival ethics and a move towards a relational, positionality-aware and context-sensitive understanding of care. However, in the case study presented here, this formulation of an “ethics of care” unfolds complexities of its own, since the broader context is formed by the civil war in northern Ethiopia, which has been ongoing since 2020 in the Tigray, Afar and Amhara regions, in the latter of which the mountain stronghold of Maqdala is located.

The legal aspect: Acquisition in good faith vs. looting

The contribution mentioned above in the introduction and written by Addis Abeba-based journalist Maya Misikir questions the justifications provided by cultural heritage institutions why cultural property coming from Maqdala is being kept. She then proceeds by indicating the pillage of Ethiopian artefacts in the recent civil war that has taken place in Tigray, the northernmost region of Ethiopia. Between November 2020 and November 2022, “relics, manuscripts, and other ancient artefacts such as coins and bibles were seized by the invading forces”,⁴ some of which were offered online for sale on platforms like eBay.⁵ From an ethical point of view, the equation of looting of cultural heritage that has taken place in recent times with a looting that took place more than 150 years ago is perfectly comprehensible. However, legal frameworks have changed much within this time. While cultural property is protected in armed conflicts by the respective UNESCO convention issued in 1954 (UNESCO 1954) and the import, export and transfer of ownership of cultural property is declared illicit in the UNESCO convention issued in 1970 (UNESCO 1970), the same is not the case for the 19th century. Rather, the acquisition of cultural property looted during or after an armed conflict was seen as legal by contemporaries. This is the case with two manuscripts held by Berlin State Library. A certain Götz Graf von Seckendorff,⁶ a Prussian Lieutenant who accompanied the British punitive expedition to Abyssinia, bought (at least) two manuscripts “after the Battle of Magdala and presented [them] to King Wilhelm”,⁷ who donated them to his library in Berlin, an institution which is now named Berlin State Library.

How can the acquisition of items looted in armed conflict be legal? A law scholar explains the practice of the 18th and 19th centuries by differentiating the terms “booty of war” and “prize”; while the term “booty of war” or “spoils of war” applies to the movable property taken from an enemy on land, the term “prize” designates hostile property captured at sea. “A terrestrial prize taken by a capture affected by the Army, a land force, was called booty of war and was distinguished from a naval prize in some respects. Thus, although it was also usual for the Crown to grant a large booty to the troops involved and to specify its distribution amongst them, this was done by means of a special proclamation relating to the specific capture and not by means of a standing, albeit temporary, measure covering all captures made during a specific war, as was the case with naval prizes. The ad hoc granting of a booty of war did not set any precedent and did not entitle military captors to a similar award in future.” (Van Niekerk 2016, 123). Both terrestrial

⁴ <https://africanarguments.org/2024/09/the-destruction-and-looting-of-heritage-in-the-tigray-war/>.

⁵ <https://www.independent.co.uk/news/world/africa/ethiopia-relics-artefacts-tigray-conflict-b2010985.html>.

⁶ For more information on Seckendorff, see <https://d-nb.info/gnd/117462802> and (Heavens 2023, 93).

⁷ <https://www.theprinceandthep plunder.com/tag/berlin-state-library/> and (Heavens 2023, 222).

and naval properties could be sold, and the proceeds were distributed amongst the soldiers. Exactly this process happened after the battle of Maqdala: “The plunder taken in Magdāla was sold by auction, and the proceeds of the sale distributed among the troops as prize-money” (Hozier 1869, 251). As Graf von Seckendorff recounts, “[e]ine große Anzahl Bücher fand wenig Liebhaber, denn niemand kannte ihren rechten Werth, doch sollen sich interessante Manuscripte unter ihnen befinden, von denen manche für die Geschichte des Landes besonders werthvolle Aufschlüsse geben. Der größte Theil blieb in Abessinien, da General Napier sie der Kirche von Chelikot schenkte” (Seckendorff 1869, 178).⁸ As had been announced, the proceeds of the auction were distributed: “The total receipts amounted to 5,000l. This sum was divided among the non-commissioned officers and men who were southward of the Bechilo, which gave each man a trifle over four dollars” (Stanley 1874, 471). Though von Seckendorff does not report in his account of the expedition that he bought manuscripts or other items at the auction, this becomes evident from the catalogue of Abyssinian manuscripts published by August Dillmann in 1878, where the librarian remarks that “der letztere [Graf von Seckendorff] hatte sie in Abessinien nach dem Sturm auf Magdala angekauft”⁹ (Dillmann 1878, II). Without doubt von Seckendorff, himself being a military man, was convinced that the auction was legal and according to contemporary customs. He remarks that the revenue of the auction was comparably meagre, and that Wellington had received 120,000 £ after the campaign in Spain and the battle of Waterloo (Seckendorff 1869, 179). Therefore his purchase of at least two manuscripts can be regarded as an acquisition in good faith (*bona fide* purchase), and it can be concluded that the contemporaries involved in the donation of the manuscripts to Berlin State Library did not find anything objectionable with regard to the whole process. Just like the two manuscripts donated by von Seckendorff, many cultural assets, manuscripts and artefacts found their way into European cultural heritage institutions, while others went into family possessions.

In opposition to the contemporaries, who regarded the acquisition of cultural assets at the auction held after the battle of Maqdala as lawful, the commonsensical view held today is that the looting of Maqdala is illegitimate and restitution is justified. The legal framework may be considered relevant if a court case is envisaged because restitution has to be enforced. However, in the debate of the past few years, the legal aspect has been devalued because it is being seen as the line of defense by former colonial powers; rather, other considerations like ethical or social reflections have come to the fore. The ethical point of view has become congruent with the legal foundations laid down in the two UNESCO conventions cited above, and this congruence lays the basis for the argumentation brought forward by Maya Misikir, allowing for a conflation of the looting of Maqdala with the pillages in the recent civil war. Nevertheless, describing the capturing of movable cultural heritage in Maqdala as looting and pillaging puts the fact aside that the majority of cultural heritage assets found in Maqdala, and especially the manuscripts, were the

⁸ Translation into English: “a large number of books found few enthusiasts, as no one knew their true value, but there are said to be interesting manuscripts among them, some of which provide particularly valuable information for the history of the country. Most of them remained in Abyssinia, as General Napier donated them to the Church of Chelikot.” All translation by the author.

⁹ Translation into English: “the latter [count Seckendorff] had bought them in Abyssinia after the storming of Magdala.” German original available online at https://digital.staatsbibliothek-berlin.de/werkansicht?lang=de&PPN=PPN1780195710&PHYSID=PHYS_0010&DMDID=DMDLOG_0001.

result of the looting and pillaging Emperor Tewodros II performed himself. Before 1855, when Tewodros conquered it, Maqdala was not more than a mountain stronghold. Subsequently, he constructed a number of buildings there, including a church and a palace. Tewodros is now seen as the Emperor who unified Ethiopia and ended the *Zamana Masafent* ("Era of Princes"); in the course of his military campaigns, Tewodros was not only able to crush his adversaries down, to suppress a couple of rebellions and to expropriate the Orthodox Church, but he also took a large number of manuscripts from the libraries of Gondar and the central parts of Abyssinia where he was waging war. The German scholar Gerhard Rohlfs visited Gondar in 1881 and reports that "Nicht nur mordete und schändete er, sondern alles in seinen Augen nur einigermaßen Werthvolle schleppte er fort. Gondar, zweimal von Theodor überfallen und gründlich ausgeplündert, verlor, wie man sagt, unter seiner Regierungszeit 5000 Einwohner. [...] Von den vielen Büchern, welche z.B. Combes und Tamisier als vorhanden anführen, war, ausser solchen religiösen Inhalts, kein einziges aufzutreiben. [...] Aber auf meine Frage nach Büchern gaben sie stets die Antwort: 'Theodor hat alle fortgeschleppt.'" (Rohlfs 1883, 256-57).¹⁰ Just as Emperor Tewodros attempted to establish a national army instead of the multiple regional armies, he also "wished to provide the new church with the traditional service-books and other manuscripts which turned important churches into centres of study as well as of worship." (Pankhurst 1973, 15). Even Bahru Zewde, an Ethiopian historian, characterises Tewodros in his "History of Modern Ethiopia" as a *shefta*: "Kasa the *shefta* (bandit) became Tewodros the emperor", and Zewde adds "Kasa's *shefta* days were probably the most formative period of his life" (Zewde 2002, 27-8). It is unsurprising that the approach chosen by Tewodros continuously produced new enemies within, amongst them Kasa Mercha of Tigray, who supported the British punitive expedition. While Kasa Mercha became king of Tigray in 1869 and Emperor Yohannes IV in 1871, it was the region he ruled which received 600 of the manuscripts kept in Maqdala and thus profited from the looting. Isn't it fair to say that, from today's point of view, Maqdala was the place of a double theft? Shouldn't Tewodros' actions be regarded as robbery in the very same way as the looting of Maqdala?

The social aspect: "Anchoring communities" vs. symbolic restitution

Legal aspects are important, especially if it comes to the question whether the restitution of looted cultural heritage can be enforced or not. With regard to the recent civil war that has taken place in Tigray, the northern region of Ethiopia, it is instructive to know that Eritrea never signed the 1970 UNESCO convention.¹¹ It is very likely that a lot of movable cultural heritage assets have been brought to Eritrea during the civil war, since Eritrean Defence Forces were allegedly participating in the looting and pillaging¹² indicted by Maya Misikir. However, legal aspects are not always the

¹⁰ Translation into English: "Not only did he murder and desecrate, but he also carried off everything of any value in his eyes. Gondar [was] twice attacked and thoroughly plundered by Theodore [...] Of the many books that Combes and Tamisier, for example, cite as existing, not a single one could be found, apart from those of religious content. [...] when I asked for books, they always answered: 'Theodor has dragged them all away'."

¹¹ See <https://www.unesco.org/en/legal-affairs/convention-means-prohibiting-and-preventing-illicit-import-export-and-transfer-ownership-cultural>.

¹² <https://africanarguments.org/2024/09/the-destruction-and-looting-of-heritage-in-the-tigray-war/>.

most important ones if it comes to requests for restitution. Emanuel Admassu and Eyob Derillo, in their contribution to the anthology “Fifteen Colonial Thefts”, don’t even discuss legal aspects with regard to the cultural heritage assets taken from Maqdala. Rather, they underline the impact such a looting has on the communities who are using such cultural heritage assets. More specifically, Admassu and Derillo point to everyday religious practices, in which tabots and manuscripts play an important role for the believers adhering to the Orthodox Tewahedo Church. The title of their contribution “Degodding Maqdala” points to the profound desacralisation of the sacred which turns assets used in church service and liturgies into rarefied artefacts. They highlight that such a profanation “is built on a long history of ‘degodding/de-super-natural-izing’ as a tool of empire” (Admassu and Derillo 2024, 152). Degodding (to ungod or to undeify) thus becomes an instrument of power and a direct attack on people’s religious and cultural identity. They rightly question “What does Britain gain from foreclosing their role in anchoring communities and framing rituals in Ethiopia?” and foreground that cultural heritage assets such as tabots and manuscripts are embedded in religious rituals and “anchored people to place”.

While this non-legal argument is especially convincing with regard to the looting and pillages which occurred during the latest civil war, it opens up the question whether there are still active communities in Ethiopia which suffer from the robbery which took place more than 150 years ago. If such assets are no longer available, a religious practice which includes the use of tabots and manuscripts is either discontinued, or such assets are replaced by other ones. It is doubtful that the loss of these assets gathered at Maqdala is still felt as a lack in these communities. This observation renders a symbolic dimension to the request for restitution. Moreover, there is a significant omission in Admassu and Derillo’s contribution: While they state with regard to Maqdala that “there, Tewodros was planning to build a church named Medhane Alem (‘Saviour of the World’) along with a treasury and a national library”, they omit the fact that it was Tewodros who cut the tie that anchored assets to communities and places. It was Tewodros who performed a “degodding” process by pursuing the idea of a national library. As Tewodros was plundering several communities while subordinating the local rulers (“princes”) especially in what now forms the Amhara region, he was the one to decontextualise sacred assets and collect them in Maqdala. It would be worth a dissertation on its own to identify all the communities from which the assets which were found in Maqdala possibly were taken. As of today, it is no longer known who the “anchoring communities” are which had been looted by Tewodros – and thus it is not known to whom the assets under question should be restituted.

Only in the minority of cases, hints can be found on the manuscripts indicating from which context they were taken. The two manuscript anthologies which can be found at Berlin State Library contain, firstly: a legal code of the Abyssinian kingdom (‘Fəṭḥa nagaśt’), a book of spiritual medicine (‘Mashafa faws manfasawi’); and an early Christian church order (‘Didascalia Apostolorum’). The second manuscript anthology comprises seven illustrative paintings, seven short prayers for the seven days of the week, the Psalms, 15 hymns of the prophets, the Song of Songs, a Praise of Mary (‘Weddase Maryam’), and a Praise of the Mother of God (‘Weddase wa Genaj’). The two magnificent manuscript anthologies were certainly produced for the court of a ruler. Dillmann, the cataloguer at Berlin State Library, dates both of them to the end of 17th century; for the first one, he indicates that “Im 14ten Jahr des Königs Ijäsû I Adjâm Sagad d. h. a. 1696 für ‘Akâla



Figure 1. Moses receives the Ark of the Covenant from God. Illustration from an Ethiopian composite manuscript kept at Berlin State Library (Anonymous 1600); see https://digital.staatsbibliothek-berlin.de/werkansicht?lang=de&PPN=P-PN847303721&PHYSID=PHYS_0016&DMDID=DMDLOG_0005.

Christos geschrieben” (Dillmann 1878, 33),¹³ the latter being a dignitary at the high court of Iyasu I (Uhlig 2003, 165). For the second manuscript, no date is given, and the “Name der Besitzerin Walatta-Márjâm (von Bl. 236 an oft) ist an der Stelle eines ausradirten Namens später eingeschrieben” (Dillmann 1878, 12).¹⁴ While it is impossible to identify an “anchoring community” for the first anthology of manuscripts, which may have been used by a parish located at a ruler’s court, the second one can much more clearly be attributed to a mekwanint nobleman in Gondär and thus to the Ethiopian monarchy which ended in 1974. These findings separate the idea of restitution from the concept of “anchoring communities” and shift it to the symbolic sphere. Who, it has to be asked, would benefit from the restitution of the manuscripts looted from Maqdala if the concrete communities have fallen out of sight? In a country in which the decline of the state has been triggered by a civil war beginning in November 2020, who would be a legitimate representative to request restitution? If restitution is the ideal to be pursued, wouldn’t it make more sense and be of higher priority to support existing and vital “anchoring communities” in getting those sacred cultural heritage assets back which were looted during the recent civil war? But if these communities are to be found in the Amhara and Tigray Regions, would restitution not further fuel the current conflict between the central government and these regions? And vice versa: Wouldn’t a restitution to the central government do the same?

The ethical aspect: Preservation and digitisation

If the legal framework which was in force at the time when the cultural heritage assets were handed over has become obsolete; and if the “anchoring communities” to which such assets should be restituted cannot be identified, then the question arises: How can a cultural heritage institution know if it is doing good? Cultural heritage institutions like libraries, archives and museums (LAMs) are mostly inward-looking institutions which tend to focus on their core tasks: To collect, preserve and administer cultural heritage assets. If a request for restitution doesn’t come from the outside, they will keep on doing what they always did: Preserving what is there in place. Admassu and Derillo have turned this attitude against the cultural heritage institutions themselves by exposing the justifications why such assets are being kept: Such assets are better off in “climate-controlled rooms in Europe” than the “porous, temporary structures in Africa”; or that “Africans do not have the appropriate infrastructure or qualified personnel to preserve and maintain invaluable human heritage”. Held against the invalidity of the argument presented by Admassu and Derillo, these reasons seem to be unjustly ridiculing. This becomes obvious if one changes the perspective and asks about the responsibility taken on by the Ethiopian orthodox church to which “the larger part” of the more than 1.000 manuscripts were brought after the battle of Maqdala, and of which von Seckendorff explains that these manuscripts were donated to the church located in

¹³ Translation into English: “it was written in the 14th year of the reign of King Iyasu I (1696 a.d.) for Akalä Krestos”. German original available online at https://digital.staatsbibliothek-berlin.de/werkansicht?lang=de&PPN=PPN1780195710&PHYSID=PHYS_0049&DMDID=DMDLOG_0001.

¹⁴ Translation into English: “The name of the owner Walatta-Márjâm (often from p. 236 onwards) is inscribed later in place of an erased name”. German original available online at https://digital.staatsbibliothek-berlin.de/werkansicht?lang=de&PPN=PPN1780195710&PHYSID=PHYS_0028&DMDID=DMDLOG_0001.

“Chelikot” (Seckendorff 1869, 177, see citation and footnote 8 above; Seckendorff describes the church on p. 183).¹⁵ Rita Pankhurst noted that 600 manuscripts were “left behind at Čäläqot, or distributed to other churches” (Pankhurst 1973, 40). In this place, the second wife of Emperor Tewodros was buried after her death in May 1868, and the village in the Tigray region is now known as Chalacot,¹⁶ lying a few kilometres south of the regional capital Mäqälä. What happened to these manuscripts? Rita Pankhurst, upon her visit to Čäläqot in 1970, was only able to identify three of the manuscripts being kept at Čäläqot Selassie as probably coming from the Maqdala library. Further research identified 19 more manuscripts which were found in six ecclesiastic collections of Central and East Tigray (Ancel and Nosnitsin 2014). What about the remaining more than 500 manuscripts? Were some of them restituted to “anchoring communities” within Ethiopia as requested by Admassu and Derillo? The comparison between European cultural heritage institutions and the Ethiopian orthodox church opens up wider questions: Is a European cultural heritage institution to blame if it takes on the responsibility to appropriately take care of the physical cultural heritage assets? Doesn’t it do justice to the cultural heritage assets if conditions regarding their preservation and accessibility are linked to their restitution, such as that measures need to be taken to appropriately preserve these assets or written guarantees that they will be openly accessible? Or is it patronising to impose conditions for the restitution of cultural heritage?

“Restitution means access” state Admassu and Derillo in their contribution. Amongst cultural heritage institutions worldwide, there is a prioritised way to grant access: Digitisation of the assets and provision in open access. Therefore, Berlin State Library has digitised both manuscripts which came into its collections from Maqdala via von Seckendorff. The *Fäṭḥa Nagaśt*¹⁷ as well as the other manuscripts in the anthology, and the second illuminated manuscript anthology containing the Psalms, the Song of Songs, a Praise of Mary etc.¹⁸ are available in the library’s digitised collections. This may not equal restitution, but in the absence of “anchoring communities”, it provides access to the manuscripts worldwide and serves the interests of the research community. If local authorities as well as church dioceses provide access to these digital resources in Ethiopia even for people without computers and internet access – e.g. for clerics, pilgrims and scribes –, it would be possible to overcome the knowledge grabbing and epistemic violence bemoaned with regard to academic competition and rivalling knowledge communities (Woldeyes 2020, n.p.). Moreover, as Ge’ez and Amharic are typical examples of low-resourced languages, digitisation and subsequently hand-written text recognition of the vast resources of Ge’ez manuscripts available online may support the training of machine translation applications (Nekoto et al. 2020), thus alleviating information accessibility and communication worldwide and strengthening communities whose language has so far received little attention. This will keep even if the physical manuscripts return to Ethiopia some time in the future, a possibility which must not be left out of the debate. Notable in this context is the statement of the director of the Victoria and Albert Museum, who proposed that the artifacts held by V&A could be returned on a long-term loan basis, rather than permanent return.¹⁹

¹⁵ For the German original, see the citation above.

¹⁶ <https://en.wikipedia.org/wiki/Chalacot>.

¹⁷ <https://resolver.staatsbibliothek-berlin.de/SBB000376EC00000000>.

¹⁸ <http://resolver.staatsbibliothek-berlin.de/SBB0001C5A000000000>.

¹⁹ See the New York Times article at <https://web.archive.org/web/20180404185405/https://www.nytimes.com/2018/04/04/>

But even the impetus to provide access via digitisation, which strives for the noble Western ideal of openness, is debatable, because it assumes that provision in open access is embraced. By contrast, the digitisation of manuscripts relevant for the spiritual life of an Ethiopian community may be denied following an argument which underlines the relevance of cultural heritage assets for the integration of the community. According to local customs, each member of such a community has a word to say with respect to the use of such cultural assets: “The assumption is that any collection of manuscripts is the property of the entire community, both lay and ecclesiastical, and the opposition of even a single member may bring all digitisation activity to a sudden halt” (Tomaszewski and Gervers 2015, n.p.). In other words: communities’ identities might be endangered by enforced openness, and the decision to digitise is seen as patronising. It is imperative that digitisation is being undertaken with the consent of the anchoring communities; ideally, decisions around digitisation are taken by the communities and countries of origin. An exchange with such communities may spark a reflection on the principle of openness as well as on the balancing of benefits and risks of digitisation, which might enable misappropriation and exploitation of the digitised items. It might be necessary to provide technical safeguards that prohibit data mining and scraping (Pavis and Wallace 2023). Finally, if a dialogue with anchoring communities can be conducted, Western cultural heritage institutions are well advised to take the possibility into account to provide technical facilities to the local communities in order to enable access to the digital materials, or to facilitate the elaboration of a classification that determines which data can be accessed by whom, thus mediating between Western ideals and local preferences.

This juxtaposition of the ideals of restitution and openness brings the question of relational ethics to the fore. If the concern for relationships is prioritised and if all actors involved should exchange with each other on eye level, the responsibility to work towards the restitution of such cultural assets to the communities of origin has to be shared. This also implies an answer to the question how manuscripts, as well as other cultural assets, can be preserved in the future with the same care as Berlin State Library has taken in the past 150 years. Consequently, a relational “ethics of care” (Caswell and Cifor 2016, 27ff.) demands a shared vision of future preservation and may lead to the result that the best possible conditions under which the manuscripts can be preserved are currently guaranteed by the Berlin State Library. A relational ethics of care thus may, in the absence of “anchoring communities”, focus on the care, the attentive concern and maintenance of the cultural heritage object. Such a decision to temporarily maintain the status quo may be taken in view of the ongoing civil war in Ethiopia and prioritises the interests of the physical objects over the premise of immediate restitution. If the complex questions raised above have been discussed on eye-level and answers have been found, this shared responsibility may lay the foundation for a re-appropriation of the manuscripts by relevant contemporary communities as well as their re-sacralisation, a process that involves re-instituting the cultural assets in time so that they can enjoy their original functions.

arts/design/v-and-a-ethiopian-treasure.html as well as the note by the British Institute of Art & Law on the state of the debate shortly after the statement was issued at <https://ial.uk.com/cultural-property-returns-from-150-year-old-british-maqdala-expedition/>.

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