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Bettina Gierke & Margret Schild

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## **Museum Libraries in Germany: Ambassadors for Standardized Data, Building Bridges between Archives, Libraries and Museums**

Bettina Gierke, Braunschweigisches Landesmuseum, Germany

Margret Schild, Theatermuseum Düsseldorf, Germany

### **ABSTRACT**

This article is going to give an overview of the continuously developing world of standardised data and its use in German cultural institutions. It will provide an introduction into Germany's federated library system and explain how libraries developed standardised data more quickly than other cultural heritage institutions.

We argue that this head-start in using and creating standardised data means that museum librarians are best suited to support both their institutions and others, which want to implement standardised data. They can also take an ambassadorial role for standardised data produced from the museum environment, because museum librarians have the professional background to ensure the quality of such data.

**Keywords:** Museum library, Metadata, Authority file, Standardization, Data management

### **INTRODUCTION**

To understand the important role that museum libraries can and do play, it is necessary to go back to that key moment: the digital transition.

By implementing computer-based workflows in the 1960s, libraries came to be among the early pioneers of this transformational move from analogue to digital information access. As a result, the once-separate steps involved in an analogue workflow had to become integrated. Enter, at this stage, the GLAM movement: Galleries, Libraries, Archives, and Museums (GLAM) working together. These types of organisations belong to the cultural sector, and they all collect, archive, preserve, record, and present diverse aspects of the cultural heritage. In order to enable a comprehensive access to this rich heritage, the existing borders between the different sectors were replaced by collaboration and networking. Museum libraries as internal information centres are

able to take over an ambassadorial role – to connect the library world and the field of collection management.

## GERMAN MUSEUM LIBRARIES AND FEDERATION NETWORKS

Museum libraries are specialised research libraries embedded within a museum or a group of museums. They are linked closely to the profile of the museum and its history and activities. They serve the needs of curators and other museum staff, as well as provide service in public research and education. The holdings often consist of printed and digital books and periodicals, and special collections such as graphics, manuscripts, ephemera, images, posters, media collections, historical collections, and artists' books. Sometimes they also serve as an archive of the institution. They are accessible to staff for internal use, but often maintain access for the public, too.<sup>1</sup>

The main task of the museum library is to support the workflows of the museum – collecting, preserving, archiving, cataloguing, and presenting both tangible and intangible heritage, from different points of view. An embedded librarian will take an active part in the daily work of an institution, supporting research on objects of the collection, preparing exhibitions and catalogues, participating in education, and performing other museum activities.

Librarians are trained to organize their holdings according to common rules, such as cataloguing using the Resource Description and Access (RDA) framework, using authority files for persons, families, institutions, and places, and sharing catalogue data. Librarians' skillsets also include taking into consideration the individual needs of users by improving subject indexing.

Museum libraries in Germany offer an excellent case study that shows how bridges are built between archives, libraries, and museums. Germany's overall political and administrative structures function as a federal system, consisting of 16 states (Bundesländer), with numerous and geographically diversified cultural centres. These cultural centres are a sector outside national government control, funded mainly by states and cities. Very few institutions in the field of cultural heritage have an overall national scope. For the most part, state museums and libraries focus on regional history, often connected to national or international issues. For instance, one way to overcome the depredations of World War II was to establish networks for collection building and management (i.e. the acquisition of research material) among state or university libraries that went above their regional scope. Who collects what was decided by looking at the already existing core fields of research in universities and academies.<sup>2</sup>

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<sup>1</sup> Issue 12 / 2021 of „BuB“ [Book and Library - German-speaking journal for librarianship] puts the focus on libraries in museums. "About the work of museum libraries" s. Susanne Haendschke, Claudia Loest, Margret Schild: Von Leuchttürmen und Geheimtipps : die Museumsbibliothek als wissenschaftliche Spezialbibliothek, Arbeitsinstrument und Serviceeinrichtung, pp. 674-680. Online available: [https://www.b-u-b.de/fileadmin/archiv/imports/pdf\\_files/2021/bib\\_bub\\_2021\\_12\\_674\\_680.pdf](https://www.b-u-b.de/fileadmin/archiv/imports/pdf_files/2021/bib_bub_2021_12_674_680.pdf)

<sup>2</sup> The program Special Subject Collections (Sondersammelgebiete), funded by the German Research Society (Deutsche Forschungsgemeinschaft – DFG), started in 1949 and had the aim of establishing a distributed national library, holding domestic and foreign research publications from all disciplines. An evaluation and changing process started in 2011. S. Christoph Kümmel and Anke Reinhardt: Information services in the future: What is the contribution of Special Subject Collections in German Libraries. (DFG-Infobrief Issue 2.11). online available: [http://www.dfg.de/en/dfg\\_profile/evaluation\\_statistics/programme\\_evaluation/info\\_briefe/index.html](http://www.dfg.de/en/dfg_profile/evaluation_statistics/programme_evaluation/info_briefe/index.html)

In the field of arts, seven research libraries built such a network in 1964, effectively establishing a national library for art history. This venture has received support from the Deutsche Forschungsgesellschaft, or German Research Foundation (DFG) since 1972, becoming the Working Group of Art Libraries (AKB).<sup>3</sup>

At the beginning of the 1990s, the need for advice, further education, and exchange within the community of small and medium-sized art and museum libraries expanded, and the AKB, with its informal structure, was not able to meet these demands. In response, it initiated the foundation of the Working Group of Art and Museum Libraries (AKMB) as a non-profit association. This officially took place in early 1995 in Berlin, with an inaugural members' meeting at the Annual Librarians' Conference at Göttingen later that year. The AKMB serves as a platform for information exchange and for continuing education and training in all aspects of librarianship, like the management of quality control, marketing, digitalisation, preservation, ethical questions, and so on.

The collaborative cataloguing and indexing of library collections and the combined accessibility through portals to cultural heritage collections created a key result: the establishment and development of authority files. In Germany, individual authority files for persons, institutions, and topics were brought together into one Common Authority File (Gemeinsame Normdatei – GND). This was the first step towards opening up an important library tool for other target groups, mainly within the GLAM sector. The resulting initiative “GND4Culture” explored the existing use of the GND and its applications in regards to (1) the needs of different communities, (2) new ways of participation, and (3) possible consequences both for the existing framework (cataloguing rules, data models, entities) and for workflows and criteria that can include new entries.

## **NATIONAL RESEARCH DATA INFRASTRUCTURE (NATIONALE FORSCHUNGSDATENINFRASTRUKTUR NFDI)**

In order to connect all these different research institutions beyond internal state borders, the German Research Foundation (DFG) introduced a project that aims to develop a National Research Data Infrastructure. The National Research Data Infrastructure was founded in 2018 by an agreement between the national government of Germany and the 16 federal states.<sup>4</sup> This long-term project has the objective of finding standardized ways in different fields of science to make research data available and preserve this data over a long period of time.

This infrastructure project aims to build a network, both within and between different fields of research, by creating research data hubs. These hubs are called NFDI consortia. A consortium is a union of different institutions that produce and use research data. There are 26 different NFDI consortia,<sup>5</sup> as well as one broad-based NFDI consortium that takes responsibility for servicing the more specialized consortia and developing tools for data conservation and retrieval. Funding to establish an NFDI consortium comes from the German Research Foundation (DFG), with contributions by the main stakeholders of the consortium. New consortia can be established if there

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<sup>3</sup> Lersch, Thomas: The Arbeitsgemeinschaft der Kunstbibliotheken (AKB) and its members. In: *Art Libraries Journal* Vol. 21 (2016), No. 4, pp. 5-12. Online available (restricted access): <https://doi.org/10.1017/S030747220001004X>

<sup>4</sup> GWK: Bund-Länder-Vereinbarung zu Aufbau und Förderung einer Nationalen Forschungsdateninfrastruktur (NFDI) vom 26. November 2018.

<sup>5</sup> At the time of writing.

is sufficient demand for new subject areas. The field of humanities is serviced by six different NFDI consortia.<sup>6</sup>

One example of these is the NFDI 4 Culture consortium (NFDI4C), established in 2020 in the first round of funding, with nine institutions from across the cultural research sector, including museums. They were backed up by 53 possible participation partners.<sup>7</sup> The NFDI4C aims to find ways of preserving and making accessible source material and research data from non-material cultural goods relating to film, performance, music and so on.<sup>8</sup>

Museums mostly deal with data that describes material objects. Museum collections are full of artefacts that can enrich research concerning cultural heritage and the understanding of the human habitat. Yet museums are frequently overlooked because most of them are not inherently part of the research infrastructure. This gap can be closed by the NFDI 4 Objects consortium, another hub dedicated to improving interoperability and use of different types of research data.

NFDI 4 Objects was formed by 11 institutions. Over 60 partner institutions are invested in its work.<sup>9</sup> Driven by Germany's sizeable archaeological community, this NFDI consortium unites and brings together cultural heritage institutions and research facilities, with a strong focus on the humanities. In a community that, until recently, was still very much dedicated to collecting and distributing data and research results by analogue means, the task of this NFDI consortium seeks to move the field forward and go beyond the parameters within which the stakeholders have functioned for so long.

Let us briefly look at data collections in museums. There are a multitude of different commercial and non-commercial entities offering databases for museums. These databases work with different, or modified, data models. The data they collect is, mostly, not standardized. Curators and other data producers are just becoming aware of the possibilities that standardisation can bring. Therefore, one task of this specific NFDI is to work with cultural institutions to help them standardise data collection as well as try to fold historically collected data into the system.

In order to bring together data from so many cultural heritage institutions, a greater degree of standardisation should be deployed during the cataloguing process in museums. This means that museum objects need to be described by using standardised data fields and controlled vocabularies. This is where museum librarians can create a new relevance for themselves within the existing museum structure in advising museum collections-based colleagues. Just as in libraries, museums are interested in using controlled vocabularies like the GND, the Getty's Art and Architecture Thesaurus (AAT) or their Thesaurus of Geographic Names (TGN), or other national vocabularies for describing materials, object categories, historical events, and the like. All of these vocabularies are thoroughly controlled by editing boards, by the use of a scrupulously structured editing process,

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<sup>6</sup> A list of all NFDI consortia can be found here: <https://www.nfdi.de/konsortien/>.

<sup>7</sup> Holger Simon, Dörte Schmidt, and Torsten Schrade, 'Abstract', March 2019.

<sup>8</sup> Reinhard Altenhöner, Katrin Bicher, Christian Bracht, Ortrun Brand, Ina Blümel, Klaus Bulle, Maria Effinger, Andrea Hammes, Thomas Hartmann, Angela Kailus, Jürgen Kett, Sarah Pittroff, Daniel Röwenstrunk, Georg Schelbert, Dörte Schmidt, Torsten Schrade, Holger Simon, Gabriele Taentzer, Joachim Veit, Franziska Voß, Annika-Valeska Walzel, and Barbara Wiermann, 'Fokusthemen und Aufgabenbereiche für eine Forschungsdateninfrastruktur zu materiellen und immateriellen Kulturgütern. Living Document der NFDI-Initiative NFDI4Culture.', May 2019.

<sup>9</sup> <https://www.nfdi4objects.net/index.php/en/about-us/consortium> (15.10.2023).

and through communication to and discussion within larger groups of participants, since any change can have implications for the datasets for which these terms are used.

These strict editing rules are the reason why vocabularies are more appealing in an institutional context than are free and open solutions like Wikidata, which include large and open communities. Wikidata has the advantage of quickly distributing a lot of knowledge to a great many people. It is a wonderful tool, creating transparency and inviting contribution. This openness, however, makes it distinctively different from heavily regulated vocabularies. As an open source software, any institution can ingest a Wikidata vocabulary set, but they will also have to instigate an editing process for this data. This process might be what the institution is trying to achieve, but when that data is then exported to a consortial infrastructure connecting different GLAM stakeholders, this will require standardised data. The internal editorial process might then be deemed insufficient. For this reason, museums are more likely to focus on enriching existing object data with standardised vocabularies.

## EXAMPLES IN THE MUSEUM CONTEXT

The adage “all roads lead to Rome” is a fitting maxim for discussions of standardised data in the context of cultural institutions. As GND4Culture showed, archives, museums, and other representatives in the field of cultural heritage benefit from enabling authority files and contributing new terms and entities to existing frameworks. It is clear that this success can be used to encourage new ways of participation, such as with physical, multimedia, and intangible objects, and with other collections that are not limited to text-based items. Having existing structures and practices in place, participants from academic and research communities can become active in using and contributing to new aspects within the world of RDA cataloguing rules and data entities.

Prime examples are audiovisual resources, such as interviews, oral histories, or podcasts, that are often recorded in varied formats across film archives, libraries, media collections, and museums.<sup>10</sup> In 2019, a working group was founded to develop an implementation profile as well as instruction material to make these types of A/V materials better accessible using RDA cataloguing rules. The group took part in the GNDCon 2.0, a meeting of GND4Culture participants and others in 2021, and decided to focus on form specifications and genres to enable interoperability between the various vocabularies in use and to integrate them into RDA cataloguing rules.<sup>11</sup> Specifications around forms and genres, such as audiocassette or online resource, notated music or film works, are useful to identify expressions and manifestations of works and to label them clearly as audiovisual resources, if needed. They also serve as access points for searches in a heterogeneous environment. New and changing terminology reflecting ongoing technological developments needs to be considered and added to existing lists. To enable the public and researchers to make use of such data, work continues on finding sustainable solutions for data presentation, storage, and access.

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<sup>10</sup> The International Federation of Film Archives (FIAF) has published a manual to catalogue film works in five languages (English, Spanish, German, French and Croatian): <https://www.fiafnet.org/pages/E-Resources/Cataloguing-Manual.html>. The IFLA Audiovisual and Media Section has published guidelines in 2004 (<https://www.ifla.org/wp-content/uploads/2019/05/assets/hq/publications/professional-report/80.pdf>), revised and published as draft in 2017 (<https://repository.ifla.org/handle/123456789/1759>).

<sup>11</sup> These rules were introduced in 2014.

The working group is taking part in the elaboration of the new cataloguing manual for RDA, where rules for special materials such as audiovisual will be incorporated into the manual itself, instead of being relegated to appendices. In addition, a new centralised platform with standards and rules concerning libraries in German-speaking regions (D-A-CH) was launched. This will serve as the starting point for further networking across the sectors, thus improving the use of authority files like the Common Authority File (Gemeinsame Normdatei or GND).<sup>12</sup>

One example of the ways in which the field has harnessed this collaborative approach to standardized data sharing is in the performing arts in Germany. The information service *Fachinformationsdienst Darstellende Kunst* (FID DK), concerned with the performing arts, developed an independent portal to enable access to relevant resources to meet the needs of scholars and researchers in the field of theatre and dance studies. These involved acquiring and licensing academic and research publications and information and aggregating access points for resources, agents (persons, institutions), events, and productions, and even featuring a section on playbills.<sup>13</sup>

The platform brings together holdings from a wide range of diverse resources in the performing arts, such as libraries, archives, documentation centres, museums, and other collections and networks. Standards and authority files make it easier to link this heterogeneous information, to enrich existing data sets and discover new aspects and connections, in order to fill knowledge gaps.

In parallel, the academic community's need to develop common standards, terminology, and authority files related to the performing arts became obvious. Furthermore, these approaches are very well suited to GND4Culture activities opening up to diverse sectors and communities in order to establish new ways of participation. The first forum of the performing arts community took place in January 2022. Its participants approved the proposal to implement existing authority files and vocabularies, as well as to enrich them through contributions from the community and stakeholders. The foundation of the Working Group Performing Arts was promptly confirmed by the Standardisation Board (Standardisierungsausschuss).<sup>14</sup> The group undertook work on core entities in the field of the performing arts, such as work/production or event, that pose a challenge to the existing authority file, as well as the very question of which kinds of objects should be collected and how the character of these artistic works matches with existing standard entities. They have reviewed terms and their scope, made necessary changes, and added new terms, just like the audiovisual community. Museum librarians are able to bridge the gap between formal and content issues at this point.

The larger community of museums and collections met for its first forum, supported by the Standardization Office (Arbeitsstelle für Standardisierung), in early 2023. Topics of the presentations and discussions included the use of controlled vocabularies and of the GND, the benefits of their implementation, and ways to join the GND network. The participants agreed to establish an interest group of museums and collections in order to proceed with the exchange about numerous topics, such as mapping of vocabularies to GND, embedding the GND in software for

<sup>12</sup> The platform was launched in August 2023: <https://sta.dnb.de/doc>

<sup>13</sup> Portal s. <https://www.performing-arts.eu/?lng=en>. Media and film are now part of another information service, managed by the university library at Leipzig: Resources for the Communication, Media, and Film Studies: <https://katalog.adlr.link/>.

<sup>14</sup> Results of the meetings, leading to the establishment of the working group s. [https://home.uni-leipzig.de/gtw-ag-archiv/?page\\_id=1142](https://home.uni-leipzig.de/gtw-ag-archiv/?page_id=1142)

collection management, barriers to use and enrichment of the GND encountered by the museum and collection community, requirements of consulting services for museums, and additional further training for qualified staff.<sup>15</sup>

## A PRAGMATIC APPROACH TO STANDARDISATION

Museums have a long way yet to go before they reach a universal standardized workflow for creating metadata. There are a multitude of different collection management systems. Museums have created their metadata by themselves using self-made templates and systems over decades. Until just recently there has not been a concerted effort to establish collaborations for cataloguing objects as a collective.

There is a prevalent idea in many museums that all their objects are all unique, even though this is demonstrably not the case. We just have to look at prints or coins to see the flaw in this logic, and even oil paintings can be a derivative of a true original. However, this outlook is gradually changing, with museums starting to see the advantages of being able to share data amongst one another. In September 2023, the CIDOC Documentation Standard Working Group released the first version of its Exhibition Object Data Exchange Model (EODEM).<sup>16</sup> This release date shows how far apart museums and libraries still are in using and implementing standards in their respective workflows, given the way, internationally, libraries had pioneered computer-based workflows in the 1960s.

It is therefore little wonder that a library (the German National Library) is holding the key to Germany's most important authority file, the GND. How can this gap be bridged so that the authority file is protected but museums and other cultural heritage institutions can participate?

Museums seldom have the resources to work at the same level as libraries on standardisation processes. The focus of most museums has traditionally been the transfer of knowledge about objects into the wider public. Museums are skilled communicators. A study by the American Alliance of Museums showed that 'the museum' is the most trusted institution, even ahead of researchers and science.<sup>17</sup> This trust has been built over recent decades on successful communication strategies in exhibitions and community work.<sup>18</sup> Cataloguing and the creation of metadata were merely the means to make the administration of objects more efficient. This outlook has changed.

The new definition of museums by ICOM, published in 2021, defines precisely how it has changed: "A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and

<sup>15</sup> Presentations and results of discussions during the meeting s.

<https://www.museumbund.de/museumsforum/gnd-forum-dokumentation/>. The interest group was founded formally at the meeting of the Special Interest Group Documentation (Fachgruppe Dokumentation) in Berlin in October 2023. Interest groups are more casual than working groups and focus on the exchange of information instead of discussing fundamental aspects of rules and entities.

<sup>16</sup> 'EODEM', ICOM CIDOC.

<sup>17</sup> American Alliance of Museums and Wilkening Consulting, 'American Alliance of Museums 'Museums and Trust 2021 report', USA, 2021 (eingesehen 19.11.2023).

<sup>18</sup> Bernhard Graf, Deutscher Museumsbund, and Institut für Museumsforschung, eds, *Museen zwischen Qualität und Relevanz: Denkschrift zur Lage der Museen*, Berlin, 2012, S.11.



communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.” One new aspect is the insertion of “ethical communication,” which demonstrates the trend in museums towards transparency in documenting and describing their collections. With the move for more openness and the implementation of digital projects that employ Linked Open Data, museums are now shifting their focus to the creation of digital surroundings that can accommodate this aim.

There are lighthouse projects signalling the way forward, such as “Museum 4.0” in Germany, a project that looks for new ways to integrate digital technology into museum settings. But here is the crux: the reality is that most small and medium-sized institutions lack the necessary permanent funding to embed this work into their everyday activities. Museums have to find a way within their limited resources to make the leap from the work of the past, analogue and free of standards, to the work of the future, towards a collective and linked digital world with established standards.

The pragmatic approach to this dilemma is to use the abilities of information professionals within museums who have training and a strong connection to the library sector, specifically museum librarians. They are trained library professionals who are often already equipped with knowledge and certified abilities to edit authority files. They also possess an understanding of the needs and nuances of museum collections. These skills can be used to establish a way for museums to participate in their national authority files, such as the GND in Germany, and to do so within existing resources. Far more information and research data are generated in museums than is ever published. This knowledge is often trapped in museum databases but could quite easily be transferred to an authority file and thereby made available to a wide range of different cultural stakeholders.

The workload of producing authority files in this way should be distributed evenly over many participating libraries, overseen by a central institutional body that is already providing digital services to museums. This could allow for further connections between libraries and museums within this central body. This system would allow research from smaller museums, particularly those that lack a library, to be made available via bigger museums with museum libraries. The connection that would form between museums as a result would be another step in the direction of collectively cataloguing objects. The more museum libraries that join such a venture, the more evenly and effectively the workload would be distributed. In the end, it can even be hoped that libraries not connected to museums but with a clear brief within the cultural heritage field would participate in the network.

## CONCLUSION

Just as “all roads lead to Rome,” museum libraries are instrumental in leading the way on both the paths suggested here and towards opening up national authority files such as the GND. It is absolutely necessary to establish formal ways for libraries, museums, and archives to work together. Finding a common language for the challenges with and perspectives on standardised metadata is essential. Because of the rigid structure of federalisation and institutionalisation of cultural work in Germany, museums, libraries, and archives have developed very different metadata workflows. It is no mean feat to bring these three different perspectives together. The role of the museum librarian can be pivotal in this aim. Museums employ librarians for their skills and knowledge as information professionals. The librarian in a museum is often deeply embedded

into the national and international librarian network. This arrangement makes the profession of museum librarian well-equipped to build these vital and important bridges between the standardisation processes of museums and libraries.

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### **About the authors**

Bettina Gierke studied Art History and Classical Archaeology at the Christian-Albrechts-University, Kiel. Since 2020 she has been the Head of Collections Management, Research and Digitisation at the Braunschweigisches Landesmuseum. Bettina's work focuses on making historical objects and their metadata digitally available to the research community and the wider public. With a strong background in the library world, Bettina aims to connect library and museum perspectives with one another.

Margret Schild, Diploma in Documentarianship (1986), has been the Head of the Libraries of the Theatre Museum and the Film Museum Düsseldorf since 1993. Since 2005 she has been responsible for the coordination of the collection management within the local network d:kult (Digital Archive of Art and Cultural History Düsseldorf) for both museums. Her work focuses on networking between the different areas (GLAM), different topics (performing arts, film), cataloguing and indexing, the use of metadata and controlled vocabularies, presentation and accessibility.

Active within many networks: Working Group of Art and Museum Libraries (AKMB), Special Interest Group Documentation (Fachgruppe Dokumentation), Working Group Film (AK Film), Working Group Performing Arts (part of the GND Community), Network of Art and Cultural Archives