

Librarians, archivists, and museum professionals' role perceptions and cross sectoral collaboration – Signs of convergence?

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Abstract

Public libraries, archives, and museums have identifiable differences related to their founding missions and play many roles in today's cultural sector and broader society, yet LAM institutions' professional activities appear very similar. Moreover, increased digitization of LAM collections allows for increased collaboration and convergence across the institutions, and the merging of L, A, and M education at the tertiary level nurtures a common professional knowledge base. How are the LAM professions developing in relation to each other; are they growing together or apart? This paper analyzes questionnaire responses reflecting European LAM professionals' perceptions of their roles as cultural professionals and how this influences their likelihood to collaborate with others in the LAM sector. Collaboration is prevalent between the three types of professionals studied. Forty-six percent of librarians confirm that they collaborate with archives and/or museums, 60% of archives report collaborating with libraries and museums, and 73% of museologists collaborate with libraries and/or archives. LAM professionals perceive their roles as distinct and closely tied to the core of their social mission. There are various factors influencing collaboration among Library, Archive, and Museum (LAM) professionals.

Keywords

Archivist, collaboration, librarian, museologist, professional roles

Introduction

Is the convergence of libraries, archives, and museums, the LAM institutions, being facilitated or hindered by professionals' perceptions of their roles and other contextual factors? Talk of LAM convergence is not new. Discussions about the benefits of convergence, collaboration, and even mergers among libraries, archives, and museums emerged around the turn of the millennium, coinciding with the

onset of the digital age (Given and McTavish, 2010; Hvenegaard Rasmussen, 2019). Subsequently, there has been a significant emphasis on the convergence of LAM

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institutions, especially within academic circles and in the field of library and information science (Hvenegaard Rasmussen and Hjørland, 2021). Digital developments have predominantly driven the ongoing discussion about convergence among the LAMs, enabling increasingly greater degrees of collaboration, which can serve as a significant catalyst for convergent developments.

There remains, nevertheless, considerable ambiguity concerning the relationships among the LAMs and their unique, or not so unique, roles. Historically, collections of published documents, records, and artifacts were mixed, partly because collectors did not distinguish between the various types of items collected. However, in recent times, libraries have generally been perceived as collections of books, archives as collections of records, and museums as collections of objects or items. Yet, this sharp distinction is often blurred in reality. Objects are exhibited in both archives and libraries, while special libraries and archives are frequently integrated into museums (Martin, 2007). Thus, while convergence appears natural and intuitive, even logical, well-defined boundaries appear to emerge through the cloud of ambiguity surrounding the divisions between the LAM institutions' roles and collections.

Furthermore, numerous attempts to converge the LAMs have failed, which has only added to the confusion. Several countries formulated LAM cultural policies in the 2000s, including the United Kingdom and Norway, where LAM-specific governmental agencies were established. However, these agencies were dismantled after a decade or so (Vårheim et al., 2020; Warren and Matthews, 2019, 2020). Moreover, case studies of specific LAM collaborations and institutional integration indicate that LAM collaboration has not always worked 'out of the box,' (Vårheim et al., 2019), however, limited data on the subject hinders making any final conclusions.

Convergence has not always resulted in failure; there have been successful cases. The US Institute of Museum and Library Services (IMLS) was established as a museum agency in 1976, incorporating libraries in 1996 (Frankel, 1999), just before the widespread use of ICT and digital tools. The agency has thrived even in challenging political climates, such as during the Trump administration (2017–2021), when funding for the arts and humanities seemed uncertain. This begs the question: what factors lead to the success or failure of LAM convergence?

Research question

Collaboration among LAMs can serve as a basis for convergent development; however, this necessitates that LAM professionals working within individual organizations be open and able to collaborate with each other. This puts into question their professional roles: do these roles complement each other in ways that facilitate collaboration, or are they profoundly different, hindering collaborative efforts? Are there contextual factors influencing their openness and ability to collaborate? To gain insight into these

questions, this paper analyzes questionnaire responses reflecting the perceptions of European LAM professionals regarding their roles as cultural professionals and how this relates to their likelihood of collaborating within the LAM sector. This is pursued through the following research questions:

RQ1—How do LAM professionals perceive their roles?

RQ2—How does LAM professionals' perception of their professional roles, along with other factors such as professional education and national context, influence their likelihood to collaborate within the LAM sector?

The topic of convergence has been intensively discussed for 25 years, with many arguments both for and against, and differing views on how it might be achieved. Answers to the research questions will provide a more informed understanding of the overall tendencies of LAM institutions toward or away from convergence, as well as the possibilities and challenges for intersectoral collaboration and cooperation. This information will be valuable for future discussions on convergence, offering a more realistic view of the subject and helping establish a platform for renewed discussion of this topic. Identifying the challenges and opportunities will also serve to guide future research.

While this research primarily focuses on European LAM professionals, the findings have the potential to offer non-European readers a more comprehensive understanding of how European LAM professionals perceive their roles and engage in collaborative practices. These insights could be valuable for understanding how European LAMs respond to digitalization, emerging technologies, and evolving roles.

Literature review

Among researchers, and especially within Library and Information Science, the convergence of libraries, archives, and museums has been on the agenda since the millennium. According to Marty (2014), the starting point for discussions on the convergence of LAMs was an article titled "History and Electronic Artifacts" by the library and information scholar Rayward (1998).

[T]he advent of electronic sources of information and their ever-increasing volume and variety will require a major redefinition and integration of the role of archives, museums and research libraries. It is my view that the distinction between all of these apparently different types of institutions will eventually make little sense, though we can anticipate turf battles between the professional groups that manage them as we get to this point. (Rayward, 1998, p. 207)

In the wake of Rayward's article, research on digital convergence flourished (selected key studies: Dempsey, 1999; Duff et al., 2013; Marty, 2008; Zorich et al., 2008;).

However, the predominant focus on digitalization has been criticized. Hvenegaard Rasmussen (2019) argues that digitalization is not the only driver of convergence. He points out that other changes in institutions' environments, such as shifts in cultural policy, can be important drivers. Warren and Matthews (2019, 2020) raise a similar critique using the term "physical convergence," where they focus on shared values and mergers between LAM institutions.

In a Nordic context, shared values among LAMs have been a rising topic for the last decade. Larsen (2018) describes LAMs as an important part of the public sphere, while Huvila (2016) documents that LAM professionals across different types of institutions view their institutions as pillars of democracy. In 2019, *The Nordic Journal of Cultural Policy* published a thematic issue on collaboration and convergence of LAM (Kann-Rasmussen et al., 2019), and in 2023, the anthology *Libraries, Archives, and Museums in Transition: Changes, Challenges, and Convergence in a Scandinavian Perspective* was published (Hvenegaard Rasmussen et al., 2023). On one hand, the anthology highlights external factors causing convergence and collaboration, such as cultural policy, digitalization, and climate change. On the other hand, the anthology emphasizes common challenges for LAMs, including digital communication, participation, activism, and community building.

Research on LAMs offers numerous examples that potentially support convergence and collaboration. However, there is also research on collaboration between LAMs that reveals a more nuanced and sometimes negative perspective. Based on reports of digital convergence, Tanackovic and Badurina (2009) investigated Croatian museums' collaboration with libraries and archives and found it to be sporadic and ad hoc. Even when collaboration exists among different LAMs, it can be problematic, though these problems are sometimes seen as manageable (Wellington, 2013), while in other instances, collaboration is described as a serious threat to professional identity, especially for professionals in museums and archives (Cannon, 2013; Howard et al., 2016; Robinson, 2016, 2018).

Conceptual framework

As the previous literature demonstrates, there are varied viewpoints on convergence and collaboration among LAMs. However, particularly relevant conceptually when discussing the convergence and collaboration of LAMs are Klimaszewski's (2015) constructs of "lumping" and "splitting," which were coined by Zerubavel (1996) and represent different ways of perceiving and organizing things in the physical world. "Lumping" emphasizes similarities, while "splitting" involves recognizing differences. The process of "lumping" and "splitting" is not primarily a result of innate similarities or differences but rather a product of socialization. Klimaszewski concludes:

The process of lumping and splitting, then, is not the result of a recognition of innate sameness or difference to be found within the things themselves but, rather, a reflection of ideas about sameness and difference that we have been socialized to see. Therefore, who is doing the lumping and splitting (and why) is as relevant as what is being lumped or split. (Klimaszewski, 2015, p. 352)

Often, this trend toward lumping is influenced by outsiders, such as policy makers, grant funders, and information science researchers, who seem to have their own ideas about how and why LAMs should come together (Klimaszewski, 2015, p. 364). Moreover, the trend toward lumping has been criticized, especially by professionals working in museums and archives. According to Vanderberg (2012), the convergence discourse is mainly an attempt to rebrand LAMs, while the main driver for mergers of LAMs, as noted by Robinson (2018), has been to lower the cost of public governance and their day-to-day operation.

Nevertheless, and of particular importance, the tendency toward lumping and splitting underlies much of the aforementioned research. In contrast, in this study, participants are professionals affiliated with either libraries, archives, or museums, with the primary emphasis not placed on collaboration and convergence between LAMs. Instead, the survey focuses on their perceptions of their roles within one of these three types of institutions. The findings can, therefore, provide a more objective perspective on the potential for either "lumping" or "splitting" in the context of collaboration among LAM institutions.

Methods

The paper is based on questionnaire responses collected as part of the international ALMPUB project (The ALM Field, Digitalization, and the Public Sphere), which was conducted among Danish, German, Hungarian, Norwegian, and Swedish librarians, archivists, and museum professionals in winter 2018 and spring 2019. The project was financed by the KULMEDIA program under the Research Council of Norway. The overarching project aim was to investigate the different roles of libraries, archives, and museums in creating a public sphere in the age of digitalization. The results of the respective questionnaires administered to LAM professionals have undergone various analyses exploring connections to diverse issues (Audunson et al., 2020; Johnston et al., 2022, 2023; Rydbeck et al., 2022), and this paper is one of the outcomes of these analyses.

The comparative design of this study contributes to the robustness of the findings and enhances the international, particularly the European, value of the research. The countries being compared represent somewhat different traditions and cultures: the Scandinavian countries, with their

egalitarian and social democratic traditions; Germany, one of the founding nations of the EU, often regarded as the financial and industrial locomotive in Europe; and Hungary, with its postwar history as an (unwilling) member of the Soviet bloc and its central role in the dissolution of that bloc from 1989. Four of the five countries are EU members, with a membership history ranging from Germany, one of the signatories of the Treaty of Rome in 1957, to Hungary, which became a member in 2004. One country (Norway) is a non-member but closely related to the EU through the European Economic Area (EEA) Agreement. Exploring how various issues and topics related to LAM professionals play out in the different contexts can aid in understanding the influence of various sociopolitical contexts on professional practices. It can also help identify the professional norms and values that transcend political borders.

Questionnaires

The questionnaires were developed together by the research team and subsequently translated from English into the national languages of the respective countries (i.e., Danish, German, Hungarian, Norwegian, and Swedish). Directors and leaders of public libraries, archives, and museums in the Scandinavian countries and Hungary were then asked to distribute the corresponding questionnaires to their employees. The questionnaires were circulated through professional mailing lists in Germany (Audunson et al., 2020, p. 167). All responses remained anonymous, both to the researchers and to the respondents' colleagues and supervisors. While the sample is not intended to be fully representative, significant conclusions can be drawn, given the substantial number of professionals who participated in the survey, as will be presented in the findings.

The perceptions that the questionnaire respondents have of their roles as cultural professionals were investigated by presenting them with a list of professional roles (see Table 1) and asked the following question: "The role as a library/museum/archive professional is a complex one. How similar do you perceive your role as a library/museum/archive professional in the community where you work to the following roles? Place yourself on a scale from 0 to 5, where 0 means that the role is not similar to the roles you play at all, and 5 means very similar."

The focus of this study is limited to the professions considered to be the most similar to LAM professionals' roles and the degree to which the LAM professionals feel closeness to each other, as this may influence their likelihood to collaborate. A more thorough examination of the LAM professionals' perceptions of their professional roles and identities can be found in Khosrowjerdi et al. (2024).

Regarding the professions selected for the list of professional roles, the goal was to include broad professions such as teacher or editor, professional

specializations related to the technological turn such as knowledge manager, social media specialist, or information systems manager, and professional specializations related to the social roles of the LAM professions such as an agent for public enlightenment or cultural/literary mediator.

The investigation into collaborations among LAM professionals within the sector included the following question: Librarians were asked, "Do you have any collaboration with local archives and museums?"; archivists, "Do you have any collaboration with local libraries and museums?"; and museologists, "Do you have any collaboration with archives and libraries?" Respondents were provided with the response options: "No," "with archives," "with museums," or "with both" (in the case of librarians). Response options were customized accordingly for archivists and museologists. "Collaboration" was not explicitly defined or described. Instead, it was intended to be determined by the LAM professionals themselves, based on their own understanding and reflections of their work experiences.

Analysis

Binary logistic regression was used to investigate the possible effects of the sociodemographic factors and LAM professionals' perceptions of similarity between their roles and other professions on their odds to collaborate with other LAMs (binary variable: Yes/No). The logistic regression outcomes are commonly understood in terms of increased or decreased *likelihood (odds)* due to its application in binary classification tasks. In such scenarios, the primary objective is to estimate the probability of an observation pertaining to one of two potential categories, such as yes/no, 1/0, and so on. The assumptions of logistic regression analysis (e.g., large sample size, not-too-high correlations between independent variables, the independence of observations, etc.) were checked before running the analysis.

The sociodemographic factors selected for the analysis were age, country, educational background, immigrant status, and community size. Age, for instance, may correlate with work experience duration and expertise level. Professional education plays a role in shaping career identity and can enhance eligibility for specific roles, particularly in leadership and management. LAM professionals with an immigrant background may be more likely to take on roles related to multicultural services and outreach due to linguistic and/or cultural competencies, potentially increasing collaboration opportunities. However, they may also face challenges in achieving inclusion within professional arenas, impacting their ability to collaborate. Lastly, the size of the community served by the respondent's institution is noteworthy. Professionals in smaller municipalities may have

Table 1. The list of related professions in each survey.

Librarians' survey	Archivists' survey	Museum professionals' survey
Agent for enlightenment	Agent for enlightenment	Agent for enlightenment
Communication officer/PR agent	Communication officer	Communication officer/PR agent
Event manager	Event manager	Event manager
Moderator	Moderator	Moderator
Social media specialist	Social media specialist	Social media specialist
Editor	Editor	Editor
Social worker	Social worker	Social Worker
Youth worker	Youth worker	Youth worker
Teacher	Teacher	Teacher
Web designer	Web designer	Web designer
Archivist	n.a.	Archivist
Community developer	n.a.	Community developer
Integration consultant	n.a.	Integration consultant
Cultural facilitator/animation/coordinator	n.a.	Cultural mediator
Curator in a museum	Curator in museum	n.a.
n.a.	Documentalist	Documentalist
n.a.	Librarian	Librarian
n.a.	Researcher	Researcher
n.a.	Storyteller	Storyteller
Agent for freedom of expression and information	n.a.	n.a.
Interior architect/decorator	n.a.	n.a.
Literary critic	n.a.	n.a.
Psychologist	n.a.	n.a.
Security guard/surveyor	n.a.	n.a.
Literary mediator/counselor	n.a.	n.a.
Technical supporter/IT consultant	n.a.	n.a.
Information systems manager	n.a.	n.a.
Information/knowledge manager	n.a.	n.a.
n.a.	Caseworker	n.a.
n.a.	Lawyer	n.a.
n.a.	Restorator/conservator	n.a.
n.a.	n.a.	Art collector
n.a.	n.a.	Handicraftsman
n.a.	n.a.	Interior architect/decorator
n.a.	n.a.	Marketing expert

n.a.: not asked.

The LAM professionals were asked to answer the following question: The role as a librarian/museum professional/archivist is complex. How do you personally perceive your professional role compared to the roles listed as . . . The alternative responses (listed in this table) were scaled 0–5 in which 0 = does not correspond at all with the roles I have (very dissimilar); 5 = corresponds very well with the roles I have (very similar).

fewer collaboration opportunities with diverse public collections compared to those in larger cities. Nonetheless, collaborations with other institutions may arise out of necessity. Identifying both negative and positive tendencies related to these various factors will guide future research.

Results

Response rates and backgrounds of respondents

The total number of responses received from librarians was 2812. The vast majority were female (84.1%) with a

relevant educational background in LIS (79.3%) and a non-immigrant background (90%). The age distribution was as follows: under 30 (7%), 30–39 (21%), 40–49 (27.3%), 50–59 (31.4%), 60 and over (12.8%). Compared to the archival and museological respondents, this professional group is the most female-dominant among the three. Well over the majority is aged between 40 and 59 years, indicating a slightly older age distribution. Lastly, this group also has the highest percentage with a relevant educational background.

The total number of responses received from archivists was 597. The majority of respondents were female (56.1%), and well over the majority had an educational background in archival studies (60.3%). The age

distribution was as follows: under 30 (6.4%), 30–39 (21.6%), 40–49 (27.5%), 50–59 (27.6%), 60 and over (15.4%). Nearly all respondents had a non-immigrant background (90.6%). In contrast to librarians, this professional group appears to have a more balanced gender distribution and an age distribution similar to librarians, albeit with a slightly higher percentage in the over 60 age group. However, the responses indicate that archivists have the lowest percentage of professionals with a relevant educational background compared to librarians and museologists.

Of the surveyed museologists ($N=634$), well over the majority were female (60.7%) and possessed a relevant education in museum studies (66.2%). The age distribution was as follows: under 30 (9.1%), 30–39 (24.9%), 40–49 (29.4%), 50–59 (24.4%), 60 and over (11.1%). The vast majority had a non-immigrant background (80.1%). Consequently, these findings indicate that this group is more female-dominant than archivists but less so than librarians. The age distribution is slightly younger than that of the other professional groups, with a higher percentage in the under 30 group and a lower percentage in the over 60 group. Moreover, a slightly higher percentage of museologists than archivists appear to have a relevant educational background, but still significantly less than librarians. Notably, the findings indicate that this group also includes a slightly higher proportion of individuals with an immigrant background compared to the other two groups.

Role perceptions

As stated previously, respondents were asked to assess the similarity of their roles as library/museum/archive professionals in the community to different professional roles. The respondents' responses indicate that the three professions do not feel related to each other. Archivists consider librarians as the 10th most similar profession and museum curators as the 9th among 18 listed roles. Conversely, librarians rank archivists and museum curators as the least similar roles, placing them at the 24th and 25th positions out of 25 listed roles. Museum professionals similarly regard archivists as the 11th and librarians as the 18th among 22 roles akin to their own.

All three groups ranked professional specializations closely aligned with the core of their social mission, with little crossover between them. Archivists indicated that the professions most similar to their role were documentalist (3.52), caseworker (3.27), and researcher (3.10). Librarians identified literary mediator (4.04), cultural mediator (3.47), and communication officer (3.36) as the professions most similar to their role. Museum professionals pointed to storyteller (3.56), agent for enlightenment (3.33), and cultural mediator (3.25).

LAM Collaboration: The case of library professionals

In response to the question about whether they had collaborated with local archives and museums, nearly half of the librarian respondents (46.6%) indicated that they had collaborated with archives, museums, or both (9.9, 16.4, and 20.3%, respectively). The details of librarians' collaboration with archives and museums by country is shown in Table 2.

The results of the logistic regression analysis models revealed that country ($p < 0.001$), community size ($p < 0.001$), and the perception of roles as similar to an *event manager* ($p < 0.001$), *community developer* ($p < 0.001$), or *curator in a museum* ($p < 0.001$) were statistically significant predictors of librarians' collaboration with archives¹. Additionally, Danish and German librarians were 4.9 times and 2.9 times, respectively, more likely to collaborate with archives than Swedish librarians. In contrast, Hungarian librarians were 0.4 times less likely to collaborate with archives than their Swedish counterparts. Librarians working in medium-sized communities (10,000–49,999 inhabitants) were 1.4 times more likely to collaborate with archives than those in larger communities (50,000 inhabitants or more). Furthermore, librarians who perceived their role as similar to that of an event manager or curator in a museum were less likely to collaborate with archives, whereas those who perceived their role as similar to that of a community developer were more likely to collaborate.

Model 2 (Supplemental Appendix 2) shows the effect of the sociodemographic factors on the likelihood of librarians collaborating with museums². Country ($p < 0.01$), educational background in LIS ($p < 0.05$), community size ($p < 0.001$), and perception of role as similar to a *communication officer* ($p < 0.05$), *moderator* ($p < 0.01$), *literary mediator* ($p < 0.05$), or *curator in a museum* ($p < 0.05$) were statistically significant predictors of collaboration with museums. Although the country was a significant predictor of collaboration with museums for the whole data, the within-country differences were not statistically significant.

Librarians who had an educational background in LIS were 1.5 times more likely to collaborate with museums than those without such a background. Librarians working in medium-sized communities (10,000–49,999 inhabitants) were 1.9 times more likely to collaborate with archives than those working in large communities (50,000 inhabitants or more). Librarians' perception of their role as similar to that of a *moderator*, *literary mediator*, or *curator in a museum* had a positive effect on their collaboration with museums, whereas the perception of their role as a *communication officer* had a negative effect.

Table 2. Librarians' collaboration data.

Answers	Country					Total
	Denmark	Germany	Hungary	Norway	Sweden	
Collaboration						
Yes, with archives						
Count	126	64	15	26	42	273
%*	23.6%	13.1%	1.9%	7.9%	6.9%	9.9%
Yes, with museums						
Count	51	57	178	69	99	454
%	9.6%	11.7%	22.0%	21.0%	16.3%	16.4%
Yes, with both						
Count	171	133	153	22	84	563
%	32.1%	27.3%	18.9%	6.7%	13.8%	20.3%
No						
Count	185	233	464	212	384	1478
%	34.7%	47.8%	57.3%	64.4%	63.1%	53.4%
Total						
Count	533	487	810	329	609	2768
%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Within country.

The third model (Supplemental Appendix 3) assessed the effect of previously noted variables on the likelihood of *collaboration with both archives and museums* among librarians³. Country ($p < 0.001$), age ($p < 0.05$), gender ($p < 0.01$), community size, ($p < 0.001$), and perception of role as similar to a *technical support/IT consultant* ($p < 0.05$), *agent for enlightenment* ($p < 0.01$), or *literary mediator* ($p < 0.05$) were statistically significant predictors of librarians' collaboration with both archives and museums.

Danish librarians were more likely (2.4 times) and Norwegian librarians were less likely (0.2 times) to collaborate with both archives and museums than Swedish librarians. The librarians in age groups 30-39 (0.5 times) and 40-49 (0.7 times) were less likely to collaborate with both archives and museums than librarians aged 60 and over. Librarians working in communities with Less than 10000 inhabitants and those working in communities with 10000 - 49999 inhabitants were (0.2 times and 0.6 times) less likely to collaborate with both museum and archives than those librarians working in communities with 50000 inhabitants and more. This indicates that librarians in bigger communities have more tendency to collaborate with both.

Librarians who perceived their role similar as an agent for enlightenment were 1.165 times more likely to collaborate with both archives and museums compared to those who did not have this perception. Finally, Librarians who perceived their roles similar as technical support/IT consultant and Literary mediator/counselor were (0.9 times) less likely to collaborate with both archives and museums.

Collaboration with other sectors:

The case of archivists

Well over the majority (61%) of the surveyed archivists answered that they had previously collaborated with libraries (14.3%), museums (13%), or with both libraries and museums (33.8%). The details of archivists' collaboration by country are shown in Table 3.

The results of the logistic regression analysis models (Supplemental Appendices 4–6) revealed that the effect of the variables on the likelihood of archivists' collaborating with libraries were not significant in regard to archivists' collaboration with libraries or museums⁴. However, country ($p < 0.05$) and perception of role as similar to a *social media specialist* ($p < 0.01$) were statistically significant predictors of archivists' collaboration with both libraries and museums⁵.

Danish and Norwegian archivists were (0.4 times and 0.2 times) less likely to collaborate with both libraries and museums than Swedish archivists. Hungarian archivists were 3.44 times more likely to collaborate with both libraries and museums than Swedish archivists. Archivists who had higher perceptions of the archivist role as *social media specialist* were 1.1 times more likely to collaborate with both libraries and museums.

Collaboration with other sectors:

The case of museologists

The vast majority of the surveyed museologists (73.5%) indicated that they had previously collaborated with

Table 3. Archivists' collaboration data.

Answers	Country					Total
	Denmark	Germany	Hungary	Norway	Sweden	
Collaboration						
Yes, with libraries						
Count	14	35	5	19	12	85
%*	23.7%	18.8%	11.4%	14.1%	7.1%	14.3%
Yes, with museums						
Count	7	29	2	16	23	77
%	11.9%	15.6%	4.5%	11.9%	13.5%	13.0%
Yes, with both						
Count	18	65	34	21	63	201
%	30.5%	34.9%	77.3%	15.6%	37.1%	33.8%
No						
Count	20	57	3	79	72	231
%	33.9%	30.6%	6.8%	58.5%	42.4%	38.9%
Total						
Count	59	186	44	135	170	594
%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Within country.

libraries (8.5%), archives (14.8%), or with both libraries and archives (50.2%). The details of museologists' collaboration by country are shown in Table 4. Collaboration variable(s) were not investigated in the Norwegian sample, and therefore not included in the findings.

The results of the logistic regression analysis models (Supplemental Appendices 7–9) revealed that perception of role as being similar to a *social media specialist* ($p < 0.05$), *cultural mediator* ($p < 0.05$), or *archivist* ($p < 0.05$) and gender ($p < 0.05$) were statistically significant predictors of museologists' collaboration with libraries⁶.

Male museologists were 2.7 times more likely to collaborate with libraries than their female counterparts. Museologists aged 30–39 were 6.2 times more likely to collaborate with libraries than those aged 60 and over. Museologists who perceive their role as similar to that of a *social media specialist* or *archivist* were less likely to collaborate with libraries (0.7 and 0.8 times respectively), whereas those who perceived their role as similar to that of a *cultural mediator* were 1.3 times more likely to collaborate with libraries.

The second model assessed the effect of the variables on the likelihood of museologists collaborating with archives (Supplemental Appendix 8)⁷. The country ($p < 0.001$) and perception of role as being similar to a *moderator* ($p < 0.05$) or *librarian* ($p < 0.05$) were statistically significant predictors of museologists' collaboration with archives.

The Danish museologists were 3.2 times more likely to collaborate with archives than Swedish museologists, and Hungarian museologists were 0.2 times less likely to collaborate with archives than Swedish museologists.

Museologists' perceptions of their role as a *moderator* had a negative effect, and perceptions of their role as a *librarian* had a positive effect on collaboration with archives.

The last model examined the effect of mentioned variables on the odds of museologists' collaboration with both libraries and archives (Supplemental Appendix 9)⁸. The country ($p < 0.001$), age ($p < 0.001$) and perception of role as similar to a *social media specialist* ($p < 0.05$) or *archivist* ($p < 0.05$) were statistically significant predictors of museologists' collaboration with both libraries and archives.

The Danish museologists were 0.3 times less likely to collaborate with both libraries and archives than Swedish museologists. The Hungarian museologists were 2.2 times more likely to collaborate with both libraries and archives than Swedish museologists. The museologists aged 30–39 were less likely to collaborate with both libraries and archives than those aged 60 and over. Museologists who perceived their role as similar to a *social media specialist* were 1.2 times more likely to collaborate with both libraries and archives. Museologists who perceived their role as similar to an *archivist* were 1.2 times more likely to collaborate with both libraries and archives.

Those museum professionals who perceive their roles as similar to a *librarian* tend to collaborate with archivists and those who perceive their roles as similar to an *archivist* are more likely to cooperate with librarians or both librarians and archivists.

Summary of results

The main finding is that collaboration is prevalent between the three types of professionals studied. Forty-six percent

Table 4. Museologists' collaboration data.

Answers	Country				Total
	Denmark	Germany	Hungary	Sweden	
Collaboration					
Yes, with libraries					
Count	6	15	18	14	53
%	4.5%	9.0%	12.8%	7.7%	8.5%
Yes, with archives					
Count	34	26	4	28	92
%	25.8%	15.6%	2.8%	15.3%	14.8%
Yes, with both					
Count	40	78	100	95	313
%	30.3%	46.7%	70.9%	51.9%	50.2%
No					
Count	52	48	19	46	165
%	39.4%	28.7%	13.5%	25.1%	26.5%
Total					
Count	132	167	141	183	623
%	100.0%	100.0%	100.0%	100.0%	100.0%

of librarians confirm that they collaborate with archives and/or museums, 60% of archives report collaborating with libraries and museums, and 73% of museologists collaborate with libraries and/or archives.

Other key findings from the study indicate that there are various factors influencing collaboration among Library, Archive, and Museum (LAM) professionals. Danish librarians exhibited a higher likelihood of collaboration, while Norwegian counterparts were less likely. Age and community size also played roles, with younger librarians and those in smaller communities less inclined to collaborate. Certain role perceptions among librarians influenced collaboration positively or negatively, emphasizing the nuanced nature of intersectoral collaboration. Positive effects on collaboration with museums were observed for librarians who perceived their roles as similar to a moderator, literary mediator, or museum curator, while a negative effect was associated with the role of a communication officer. Librarians identifying with the role of an agent for enlightenment were more likely to collaborate with both archives and museums, while those perceiving roles as technical support/IT consultant or literary mediator/counselor were less likely to collaborate.

Among archivists, country and the perception of roles, particularly as a social media specialist, significantly impacted collaboration. Danish and Norwegian archivists were less likely to collaborate, while Hungarian archivists demonstrated a higher likelihood. The role of social media specialist positively influenced collaboration among archivists.

Male museologists and those aged 30–39 were more likely to collaborate with libraries, contrasting with their female and older counterparts. Role perceptions, especially

as a social media specialist or archivist, negatively affected collaboration with libraries, while a social media specialist role had a positive impact on collaboration with both libraries and archives. A cultural mediator role had a positive impact on collaboration with libraries. Danish museologists were more likely to collaborate with archives, while Hungarian counterparts showed a decreased likelihood. Perceptions of roles as a moderator had a negative effect on collaboration with archives, while librarian roles positively influenced collaboration.

These findings underscore the complexity of collaboration dynamics among LAM professionals and highlight the impact of demographic and role perception variables on cross-sectoral collaboration. The main findings are summarized in Table 5.

Discussion

In response to the main question—Are there signs of convergence?—the primary discovery indicates a prevalent trend of collaboration among the three professional domains, albeit to varying degrees. Museologists appear to engage in collaboration to a far greater extent than librarians, with archivists falling in the middle. While these differences present some interesting questions in need of further exploration, the findings related to the two research questions provide insights into what influences the likelihood of LAM collaboration.

In addressing RQ1 concerning the perceptions of their roles, this study unveils a somewhat surprising finding: a perceived lack of close relation among the three LAM professions. Archivists see librarians and museum curators as moderately similar, while librarians regard archivists and

Table 5. Predictors of collaboration with LAMs.

Collaboration	With archives	With museums	With libraries	With both
Librarians	§ Danish* and German > Swedish § Hungarian < Swedish § Librarians in medium-sized communities > those in large Event manager (-) Curator in a museum (-) Community developer (+)	§ Those with ALM education > without ALM education § Librarians in medium-sized communities > large communities § Moderator role (+) § Literary mediator (+) § Curator in a museum (+) § Communication officer (-)		§ Danish > Swedish § Norwegian < Swedish § Senior librarians (60 and over) > younger librarians Technical support/IT (-) Agent for enlightenment (+) Literary mediator (-)
Archivists		n.s.	n.s.	§ Danish and Norwegian < Swedish § Hungarian > Swedish § Social media expert role (+)
Museologists	§ Danish > Swedish § Hungarian < Swedish § Moderator role (-) § Librarian role (+)		§ Male > female § 30–39 > 60 and over § Social media expert (-) § Archivist (-) § Cultural mediator (+)	§ Danish < Swedish § Hungarian > Swedish § 30–39 years < 60 and over § Social media role (+) § Archivist role (+)

n.s.:The analysis was not statistically significant.

*Not stated countries means no statistically significant results in comparison with Sweden (the reference group). The situation has been relatively similar. < (less likely than), > (more likely than), + (positive effect), - (negative effect).

museum curators as the least similar to their professional role. Similarly, museum professionals find archivists moderately similar but view librarians as one of the least similar professions. This highlights divergent perceptions regarding professional roles within the LAM sector. Moreover, all three professions perceive their roles as related to professions more centrally aligned with their respective social missions. Archivists relate to documents, casework, and research; librarians to literary mediation, cultural mediation, and serving as a communication officer; and museum professionals to storytelling, promoting enlightenment, and cultural mediation. Notably, cultural mediation emerges as the only common ground between librarians and museologists. These findings further emphasize the divergent role perceptions of LAM professionals. In terms of Klimaszewski's (2015) "splitting" and "lumping," this study reveals a clear tendency toward splitting among LAM professionals. Several factors might influence this, but one obvious historical and institutional explanation for the distinct role perceptions is the emergence of the three separate professions, institutions, and knowledge regimes. In the 20th century, this is reflected in the development of separate educational and training pathways for professionals working in libraries, archives, and museums (Given and McTavish, 2010).

In addressing RQ2 concerning the relationship between collaboration, role perceptions, and contextual factors, some intriguing trends emerge. The results reveal that certain professional role perceptions significantly impact the likelihood of collaboration among LAM professionals. Roles with a positive impact on cross-LAM collaborations include agent for enlightenment, archivist, community developer, and cultural mediator. This finding is particularly noteworthy because some of the role perceptions related to the broader social missions of institutions, which initially seemed to cause "splitting," actually increase the likelihood of collaboration, suggesting a tendency for "lumping." This has broad implications, as highlighted by Kann-Rasmussen (2019), emphasizing that cultural institutions increasingly gain legitimacy through partnerships. Consequently, one might inquire whether educational programs emphasizing broader missions and competencies could further stimulate lumping and counteract splitting (Zerubavel, 1996). Furthermore, professional education appears to play a crucial role in cross-sectoral collaboration, as the findings indicate that professionally educated librarians are more likely to collaborate with colleagues from the two other LAM fields compared to librarians without LIS education.

Interestingly, despite initial findings indicating that the three professional groups do not perceive their roles as similar, it appears that, in fact, some degree of perceived similarity to each other's professional roles may also positively influence the likelihood of collaboration. However, the findings are not entirely straightforward. Librarians

who perceived their role as similar to a museum curator were more likely to collaborate with museums but less likely to collaborate with archives. Similarly, museum professionals who viewed their role as similar to librarians were more likely to collaborate with archivists, and those perceiving their roles as similar to archivists were more likely to collaborate with librarians or both librarians and archivists. These findings suggest that perceived role affinity to other LAM professions may, at least in some cases, increase the likelihood of collaboration. As the LAM-specific professions are central, these collaborations might have a greater focus on collections and the more traditional roles associated with the three professional groups. This may also be an indicator that the sharp distinction between the collections is somewhat blurred or in the process of blurring (Martin, 2007).

Notably, roles with a negative impact on cross-LAM collaborations include communication officer, event manager, and technical support/IT. The perception of role similarity to a communication officer and event manager is particularly interesting. In one of the previous analyses of the questionnaire administered to librarians, it was found that roles such as event manager and communication officer were ranked very highly by librarians as being similar to their professional roles. It was concluded that the high ranking of those roles reflects the increased social role of librarians, as these roles can support community initiatives and collaborations (Johnston et al., 2022, page 1127). However, the findings in this article suggest that this might not be the case when it comes to libraries' collaborative activities within the LAM sector. Hence, it suggests, as indicated above, that intersectoral collaborations may be more related to collection-focused activities and less related to events and communication-centered activities. Regarding the role of technical support/IT, this finding substantiates Hvenegaard Rasmussen's (2019) finding that technological developments are not the only, maybe even not the primary, source of collaboration and convergence. Thus, this finding highlights that a value-based understanding of the professions' and institutions' social role is of vital importance.

However, possibly giving a more nuanced understanding to these findings, is the perceived similarity to the role of social media specialist, which showed both positive and negative effects on the likelihood of collaboration. Museologists perceiving their role as similar to a social media specialist were more likely to collaborate with both libraries and archives, however, less likely to collaborate with libraries alone. Similarly, archivists perceiving their role as similar to a social media specialist were more likely to collaborate with both libraries and museums. These findings, in light of the previous results, suggest that the social aspect of the role may drive intersectoral collaboration, while the technical aspect perhaps plays a greater part in simply facilitating the collaboration substantiating that

technological developments are not always the primary driver of collaboration as stated by Hvenegaard Rasmussen (2019).

Some findings are puzzling and challenging to explain; for instance, why do Danish librarians and Danish archivists have a much higher score compared to other countries when it comes to bilateral cooperation between the two professions? On the other hand, some findings may offer a relatively straightforward explanation. For instance, why is the rate of collaboration with archives so low in Hungary among both museum and library professionals? In Hungary, maintaining library service points is a mandatory task of each local municipality, while the same is not applicable to museums and archives. The high number of municipalities results in a vast number of library service points operating in very small communities with no chance of cooperation with any other type of institutions.

Research is needed on the extent and importance, and the longitudinal aspect of cross-LAM collaborations. This will give a sense of how central the collaborations are to each of the three LAMs. Does collaboration serve as an add-on to other organizational activities, or does it contribute to the core services offered by the respective LAMs? Gauging the importance or centrality of the collaborations over time will offer a greater sense of the convergent or divergent development that is or is not taking place across the LAM institutions. Furthermore, collaborative practices involve several elements such as responsibility, accountability, coordination, communication, cooperation, assertiveness, autonomy, and mutual trust and respect (Way et al., 2000). A deeper investigation into those elements would enrich the current evidence on cross-LAM collaborative practices.

Do the findings have any policy implications related to promoting cross-institutional cooperation between LAM institutions? The fact that LAM professional education promotes collaboration opens the door to the development of LAM academic programs and courses related to professional roles. More gender and ethnic diversity in recruitment to LAM educational programs and LAM workplaces, while keeping senior staff, may tilt institutional practices in directions conducive to deeper LAM collaboration. Additionally, common to all three LAM professions is that some role perceptions are more conducive to promoting cross-institutional cooperation than others.

Conclusion

The discussion on convergence has unfolded over 25 years, encompassing diverse arguments and perspectives on its feasibility. Despite convergence appearing inherent and logical, clear boundaries emerge amid the ambiguity surrounding the roles and collections of LAM institutions. As argued in this paper, collaborative efforts among LAMs

can underpin convergent development; however, this necessitates that LAM professionals be open and willing to collaborate. The study's findings shed light on these insights and establish that LAM professionals do perceive their roles as distinct and closely tied to the core of their social mission. However, somewhat surprisingly, this distinctiveness does not entirely hinder collaboration; instead, the study indicates a prevalent trend of collaboration among the three professional domains, albeit to varying degrees. Furthermore, perceptions related to broader social missions, initially seen as divisive, may actually promote collaboration, reflecting a tendency for convergence rather than divergence. The results also suggested that LAM collaborations might be more connected to activities focused on collections and less associated with events and communication-centered activities; thus relating to the traditional roles of respective LAM professionals. While the optimism of the 2000s regarding the convergence of the LAMs was largely based on the expected increase in opportunities for collaboration between the three institutions afforded by rapidly developing digital technologies, our findings show that technology alone may not be the primary source of collaboration and convergence.

Overall, in summary of the findings, it can be concluded that the three professional fields cooperate on a level that serves as a platform for further and deeper collaboration. However, little is known about the thematic content of collaboration or its depth, intensity, or permanence, warranting further research in these areas. It is also important to acknowledge certain limitations that may impact the generalizability of the findings. The non-representative nature of the gathered data, may affect the broader applicability of our results. Besides, the global changes in recent years have shaped new roles such as health information adviser (Rubenstein, 2016), financial information adviser (Kiszl and Winkler, 2022), fundraiser (Kernochan, 2016) for librarians. Thus, investigating the dynamics and impact of the newly emerged roles in the context of broader global and societal challenges could be further explored in future studies.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. Supplemental Appendix 1 shows the first model which assessed the effects of mentioned variables on collaboration with archives. The overall model was statistically significant when compared to the null model, ($\chi^2(37)=244.549$, $p<0.001$), explained 18.9% of the variation in collaboration with archives (Nagelkerke R^2) and correctly predicted 89.9% of cases.
2. The overall model was statistically significant when compared to the null model, ($\chi^2(37)=153.035$, $p<0.001$), explained 9.7% of the variation in collaboration with museums (Nagelkerke R^2) and correctly predicted 83.8% of cases.
3. The overall model was statistically significant when compared to the null model, ($\chi^2(37)=329.943$, $p<0.001$), explained 18.6% of the variation in collaboration with both archives and museums (Nagelkerke R^2) and correctly predicted 80.1% of cases.
4. The overall model was not statistically significant when compared to the null model, ($\chi^2(29)=37.257$, $p=0.14$). Second, we investigated the effect of mentioned variables on the likelihood of archivists' collaboration with museums (Supplemental Appendix 5). The overall model was not statistically significant when compared to the null model, ($\chi^2(29)=19.726$, $p=0.90$).
5. The effect of noted variables on the likelihood of archivists' collaboration with both libraries and museums was examined (Supplemental Appendix 6). The overall model was statistically significant when compared to the null model, ($\chi^2(29)=106.583$, $p<0.001$), explained 24% of the variation in collaboration with both libraries and museums (Nagelkerke R^2) and correctly predicted 72.9% of cases.
6. The effect of the variables on the likelihood of museologists' collaboration with libraries (Supplemental Appendix 7) was explored. The overall model was statistically significant when compared to the null model, ($\chi^2(27)=77.167$, $p<0.001$), explained 24.9% of the variation in collaboration with libraries (Nagelkerke R^2) and correctly predicted 93.8% of cases.
7. The overall model was statistically significant when compared to the null model, ($\chi^2(27)=97.628$, $p<0.001$), explained 24.3% of the variation in collaboration with archives (Nagelkerke R^2) and correctly predicted 88.5% of cases.
8. The overall model was statistically significant when compared to the null model, ($\chi^2(27)=264.748$, $p<0.001$), explained 40% of the variation in collaboration with both libraries and archives (Nagelkerke R^2) and correctly predicted 75.3% of cases.

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