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User Needs in the Digital Archives of the Popular Movement

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Abstract

A comprehensive understanding of user needs is required to support the development of useful digital archives. While archival science research has met this demand by inquiring into a significant range of user groups, users of popular movement archives remain understudied. Addressing this gap, this paper reports on a focus group study of key academic and professional users ($N = 21$) of popular movement archives. This study reveals user needs that are an amalgamation of informational, management-related, social, personal, and technical needs that principally emanate from the archival records themselves rather than the digital archive platform. Purposes and uses, archive and digital archive, disciplinary background, and expertise are four contexts of user needs with a significance of how users frame and express their record-finding and record-use needs in popular movement archives. The main conclusion of this study is that while it is important to recognize the heterogeneity of user groups and archives, it is similarly important to be aware and explicit about what kind of an archive a popular movement archive is for its different users and uses, and when developing a digital archive, what kind of an archive a particular digital popular movement archive is aiming to be and for whom.

Keywords: *User studies; Digital archives; Community archives; Popular movement archives; Focus groups*

The development of digital archives – broadly understood as record-keeping systems for managing and disseminating digitized records, born-digital records, or both – has attracted considerable interest and effort in both government and institutional archives, and in the diverse initiatives grouped under the ‘community archives’ umbrella term.¹ A key theme in the literature is that a sustained and thorough involvement of users in the development processes of digital archives can result in increased relevance of archival services, contents, and functions to important user groups.² A well-grounded understanding of users and user needs here emerges as a necessity for achieving and measuring the usefulness of digital archives. Mirroring the user-centered design paradigm,³ digital archives add value to the institutions or arenas they emanate from in correspondence to the degree to which they can fulfill basic user needs.⁴ Accordingly, embracing user-centered research and design

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strategies⁵ and engaging in user-driven exploration and experimentation⁶ have been suggested as the main path toward understanding and accommodating user needs in digital archives. Key steps include understanding the archival materials, identifying important user groups and their needs, tailoring the digital archive to match the identified needs, and collecting user feedback to understand whether the user-need estimations were accurate or not.⁷ Technology can meet some user needs and especially provide opportunities to allow multiple organizational schemes and entries to co-exist,⁸ but in spite of some optimistic expectations, it does not provide a blanket solution to the problem of catering for all conceivable needs within the space of digital archives.

Although there is a large number of studies focusing on the needs and preferences of a wide array of user groups in relation to different archives – ranging from historians,⁹ architects and artists,¹⁰ to archaeologists,¹¹ anthropologists,¹² educators, government officials,¹³ and beyond¹⁴ – the users of popular movement archives are notably under-researched. This is a major blind spot in the literature of archival science user research. Popular movements are underpinned by grassroots-based albeit often highly institutionalized organizations with a significant historical and present-day impact. Examples of popular movements span various civic, cultural, and political arenas, including civil rights, climate challenges, democratic governance, and the functioning of the labor market.

The archives of popular movements commonly exhibit a unique combination of characteristics otherwise manifested separately in government, institutional, and community archives in having holdings of civic, administrative, identity formation, memory making, and multidisciplinary scholarly importance.¹⁵ The closely related nebulous notion of community archives,¹⁶ which covers not only informal local history archives, amateur association, and fan community archives but also larger institutionalized archives,¹⁷ is still in many notable ways different from popular movement archives. Popular movements are to a lesser extent focused on more singular issues or agendas and are more complex and more far-reaching entities of collective action manifested in nationwide and often international organizations that play roles in shaping societal macro-trends. As a result, the archives of popular movements showcase some of the variability in terms of records and memorabilia kept as community archives do, while sharing much of the historical scope and many archive-organizational traits with government and other administrative archives. Better insights into the needs of the equally complex scholarly and professional user groups of popular movement archives not only would stand to benefit the development and design of popular movement archives but also offer more generally relevant results to the archives of other non-governmental and social-movement organizations positioned at the crossroads of academic, community, and public interests.

The purpose of this study is to delve into the needs of academic and professional users of the digital archives of the popular movement and to highlight core usability features to consider in the development of digital popular movement archives. This study subscribes to the widespread notion of users having expert knowledge within the domain of their professional practice that, if compared and contrasted with those of other user groups and their settings of work, can be elicited to inform robust understandings of how to put into being services suited to the needs of a broad range of users and many parameters of use situations.¹⁸ Literature on the (archival) needs of researchers¹⁹ and the needs of community-archive users and participants²⁰ is drawn upon to frame popular movement archives and their users as complex archival entities with facets and functionalities connecting simultaneously to the academic, government, and the non-governmental organization archival spheres. The empirical basis of the paper is a focus group interview study encompassing seven groups with a total of 21 participants (3 + 2 + 2 + 3 + 4 + 4 + 3). The focus group interviews were planned and organized drawing on task analyses²¹ and critical incident techniques,²² and participants were recruited

from academia (representing qualitative, quantitative, computer-driven, and humanistic research approaches) and organizations affiliated with the Swedish branch of a major political popular movement that has had significant impact on the development of civil society in Sweden and internationally.

Literature review

Digital community archives and user needs

Much of the literature on community archives, especially in the Western hemisphere, has focused on cultural and sexual minorities, and indigenous and migrant populations.²³ In addition to increasing the representation of previously marginalized groups in archival records, one of the key concerns of the community archives movement has been to broaden the conceptions of the use of archives and their users. This agenda entails moving from the traditional administrative, civic, and scholarly utilization of governmental and institutional archives²⁴ to embrace communities with a direct stake in particular archival records either as their creators or as those the records concern. A rebirth of interest in user studies in the archival field at the turn of the millennium after initial calls in the 1980s²⁵ parallels rather unsurprisingly with the rise of the contemporary community archives movement and evolution of digital archives. As Gilliland-Swetland²⁶ criticized in the late 1990s, many of the references to ‘other’ groups have tended to remain too broad to be operationalizable in the development of access services. Archivists have also tended to be primarily concerned with the needs of individual users visiting archival institutions rather than obtaining an understanding of the broader patterns of user needs and preferences.²⁷

One of the caveats of thinking in terms of communities is to assume that there is a natural or only one community with a stake for every archive, especially as identifying and anticipating community needs has proven to be extremely difficult.²⁸ In contrast, the emphasis on communities and the broadening of the notion of stakeholder have led to a necessity to cater for an increasing variety of user needs²⁹ and to consider the relation of archives and communities as an entanglement rather than as something given.³⁰ Digital archives, for their part, have led to that archivists no more have a personal contact with every user, and that user-led archival work – e.g., the development of systems, metadata and finding aids – has to be done on the basis of insight into broader patterns of user needs³¹ and information-seeking practices.³²

The principal difficulty in addressing user needs is that records are typically conceptualized differently when originally created and described than when they are sought.³³ Earlier studies point to that online users who lack the direct contact with an archivist – who generally have a better understanding of how records are described and organized – also tend to need more information, more complete and better-quality information,³⁴ and more intuitive user interface designed from the premises of their needs rather than the structure of descriptions.³⁵ In contrast to finding aids based on the principles of archival knowledge organization, users often find subject indexes useful.³⁶ Studies of how users document archival records show that they tend to focus on information that is more detailed and makes records findable, whereas archivists’ descriptions are not only more systematic but also abstract.³⁷ For descriptive information, users value the date, information on the location of the original material or access numbers, the extent of the material, title, document type, and an overview description.³⁸

Non-archivists have difficulties in understanding archival terminology³⁹ and need easy-to-understand-information and instructions on what information is available and where⁴⁰ and what is excluded.⁴¹ They also tend to need customized finding aids⁴² and a clear understanding of how the finding aids work to use them effectively.⁴³ Retrieving specific items has been found difficult. It can be difficult to know where to start searching in the first place.⁴⁴

Also, query-formulation causes problems. The explicit question in mind might not correspond with the real need.⁴⁵ Moreover, understanding what the retrieved records are can be difficult.⁴⁶ The contemporary community archives movement has gained a lot of traction from the development and availability of affordable digital technologies.⁴⁷ Numerous contemporary community archives are digital only, and many others focus on using digital technologies to reach out to their communities rather than preserving physical documents.⁴⁸ Many of the problems in navigating digital archives boil down to the question that users tend to be interested in the archival content rather than in the catalogues.⁴⁹ At the same time, however, successful retrieval of records requires in-depth understanding of their context. More precisely, this entails understanding them in the context of their archival bond.⁵⁰ Users' level of expertise in using of archives and computers, and in the subject matter, affects their success⁵¹ with a major difference between novices and experts.⁵² It should however be noted that studies have also made it apparent that categorizing users by level of proficiency is difficult, and that its significance for better understanding user needs is ultimately unclear.⁵³

Content-wise, the community archives movement has underlined how many users are not necessarily interested in 'the records of the rich and powerful' but rather on matters and everyday lives of those excluded from traditional administrative archives.⁵⁴ The purposes of accessing archival records vary as well. Earlier user studies of archives, museum, and library users have identified differences between professionals and academics, educational users, hobbyists, browsers, known-item seekers, and meaning-makers.⁵⁵ For non-professionals visitors, curiosity and serendipitous browsing are major motivations to access heritage collections.⁵⁶ However, it has been observed that many amateurs work much like their professional colleagues.⁵⁷ Context is generally important for all users, whereas the importance of the technical quality of the digital material varies between users and uses.⁵⁸

As a whole, the literature points to a complexity of identifying and categorizing user needs and addressing them to a satisfactory degree. A major difficulty for catering for the needs of multiple user communities is that their needs can be at odds with each other.⁵⁹ Another complication is that especially for the community members, the needs are not necessarily information needs but record-keeping needs (i.e., that certain records are kept) or, for example, identity or memory needs.⁶⁰ Topics of interest can be personally important individuals, key moments in history, social roles and customs, and everyday life in different times.⁶¹ The critique from the community archives literature and actors⁶² has also made increasingly clear the political nature of all decisions to present and leave out information.⁶³ A major issue in the inclusion of community members and their needs is to embrace community archives as a part of the archival paradigm instead of dichotomizing between proper scholarly, administrative and societally valuable, and other local and amateurish users of archives.⁶⁴

Researchers' needs and use of digital archives

Similarly to research on community archives, a long line of studies has shed light on researchers' practices and needs pertaining to the use of archival materials.⁶⁵ These studies have focused on disciplines and methodologies principally situated in the humanities – often dealing with history and historical subjects –,⁶⁶ linguistics,⁶⁷ and more quantitative and computer-driven domains like the digital humanities.⁶⁸ While information practices have changed since the advent of the web in the 1990s, much has remained the same. Although disciplinary differences exist,⁶⁹ databases are commonly experienced as being shallow, and browsing and informal means of finding relevant information continue to be relevant.⁷⁰ Another crucial premise of using digital archives is users' need to be able to trust on the materials. Chassanoff found that knowing where a physical original of a digitized record is located and how it can be accessed is an important element of trust-building in digital archives.⁷¹ Maxwell's findings also show that

trust is a key factor underpinning the usefulness of digitized records for research. His results simultaneously underline that the capacity of different digitized records for engendering trust varies between user groups.⁷² For example, studies have indicated that historians more strongly prefer digital reproductions of the original record to be in a photographic form,⁷³ while linguists' modes of text-based work may be more compatible with transcribed corpuses.⁷⁴

A major benefit of digital archives is the possibility to conduct full-text search in all materials. Several studies show that this conforms to researcher needs.⁷⁵ The drawback of the approach is the difficulty to ensure that the search results are comprehensive. It can also make understanding the context of the resulting records more difficult.⁷⁶ For these reasons, in some particular instances, full-text searching can be less compatible with long-established archival research methods based on browsing as the principal strategy to finding relevant records.⁷⁷ Another benefit of online sources in general is that they can be helpful especially in cross-disciplinary research.⁷⁸ Another feature of digital archives is that they can offer completely different modes of searching and finding records compared to non-digital archives. Such approaches include content-based image retrieval (CBIR) for records with image content⁷⁹ and natural language processing (NLP) applications like topic modeling for extracting information from textual records.⁸⁰

Researchers' success in accessing archives is typically based on their background and contextual knowledge.⁸¹ Expertise of this kind is termed 'archival intelligence' by Yakel and Torres and is understood to be comprised of, among other things, insight into archival theory, archival practice, and archival institutions, as well as familiarity with strategies for conducting successful archival research.⁸² In the same vein of reasoning, Jensen⁸³ argues that key archival knowledge archives also includes insights into system design, archival knowledge organization, and the economic framework of digitization initiatives. Carbajal and Caswell further underline that knowledge about specifically *digital* archival infrastructures and associated curatorial practices is required to proficiently be able to conduct research in such settings,⁸⁴ even it has been noted that seasoned archival researchers and other users with general experience of archival knowledge organization often find it easier to navigate a digital archive.⁸⁵ This means also that interdisciplinary researchers tend to have additional needs of contextual and background information in comparison to those working in one domain only.⁸⁶ Relevant information comprises both descriptions of the material and how it came into being,⁸⁷ for example, how it was digitized,⁸⁸ and what are the origins of the included metadata descriptions.⁸⁹ The need for process information or paradata has been suggested to be especially crucial in interdisciplinary contexts.⁹⁰ Many researchers' preference to work with personal collections signals not only the inadequacy of public repositories and available tools but also the difficulties in providing descriptions that would be comprehensive enough to cater for researchers' needs.⁹¹ One critical problem is that different users need different and different types of descriptions, for example concept and content-oriented ones.⁹² However, in practice, a single description can often be read in different ways and fulfill multiple needs depending on the research questions.⁹³

Researchers' search strategies vary from broad explorative searching to in-depth analysis of individual records.⁹⁴ Search strategies diverge and are often difficult to predict⁹⁵ but often begin with orientation and proceed to more specific searches⁹⁶ with different types of information needs emerging at different stages of research work.⁹⁷ Research processes are seldom linear, and they are closely tied to the subject matter of the research.⁹⁸ Many researchers, including historians, do also typically use materials from different archives in one project,⁹⁹ and in comparison to scientists, they search independently without help from information specialists.¹⁰⁰ Search strategies can also, to different extents, align with on-site workflows or sharply diverge from them, focusing on specific affordances of digital archives like keyword search and computer-assisted searching.¹⁰¹

Unsurprisingly, trending research topics steer what types of materials are popular among researchers. For example, growing interest in women in historical studies has increased the demand of records capable of shedding light on that particular topic.¹⁰² Similarly, the research field affects what types of materials and sources are relevant¹⁰³ even if it does not explain all variation.¹⁰⁴ For example, data intensive digital humanities research leads to additional and different needs in comparison to small-scale studies based on a limited base of source materials.¹⁰⁵ Also, different disciplinary and epistemic backgrounds play out in user needs. While many scientists and social scientists search literature and materials not familiar to them, many humanities scholars are well-acquainted with the material and types of sources they use.¹⁰⁶ Researchers conducting cumulative rather than summative research have less use for generic tools and secondary information.¹⁰⁷ Benardou and Dunning¹⁰⁸ argue that only those generic infrastructures that are able to accommodate for the granularity of the needs of different sub-communities can be successful. Bates and colleagues found that in comparison to social scientists, humanities researchers search by using proper names – known documents and works, individuals, and geographical and chronological terms – rather than broader descriptive search terms. Their search strategies also often consist of a combination of multiple facets¹⁰⁹ like a topic, geographic location, and time period. Studies by Late and Kumpulainen and Borlund and colleagues largely corroborate these results, adding that humanities researchers also often search for document names and specific types of media (documents, images, and films).¹¹⁰

The variety of document types used by researchers are broad. Not only newspapers are a popular source among historians,¹¹¹ but also correspondence, manuscripts, photographs, and periodicals are used by many.¹¹² As a whole, it is difficult to deem any particular type of record entirely irrelevant. Depending on research questions and topics, it might be necessary to have different materials and different impressions of the same material (e.g., image of a text and transcription or an image and description) available side by side.¹¹³ However, even if the available tools and descriptions would lack details and comprehensiveness, the availability of particular records is still the most important requirement.¹¹⁴ Findings suggest that when searching for images, researchers require high technical image quality.¹¹⁵ In some cases, the existing digital resources might not be of high enough quality or contain all necessary details. In such cases, even if digitization methods progress and improve, researchers still need to consult original materials.¹¹⁶

As a whole, the earlier research has identified a broad range of user needs regarding digital archival records and archival search systems. So far, much of the focus of user research has been on information searching and retrieval and the needs of individual groups of users either in general or in relation to specific archives. It is also palpable that categorizing needs on the basis of user expertise, background, and professional status is difficult.

Methods and materials

The present study is based on focus group interviews with 21 participants in seven groups (3 + 2 + 2 + 3 + 4 + 4 + 3). The interview centered on elucidating the participants' views on current and future needs crucial to their ability of accomplishing work tasks in digital archives, with an emphasis on needs relating to finding and using records. All 21 participants were in their different professional capacities significantly, but differently, they invested in the archives of a Swedish branch of a major international political popular movement. The popular movement in question has a long-established archival tradition, and its archives have notable historical value and significant usefulness for present-day organizational matters.

The focus group methodology was chosen because it is well-proven in archival science user research,¹¹⁷ is suitable for identifying the needs of user groups that are simultaneously distinct from each other, and has a degree of internal heterogeneity while remaining reasonably

homogenous.¹¹⁸ The design of the focus group study draws on critical incident techniques¹¹⁹ and task analyses¹²⁰ to better tease out and capture the needs most closely tied to successful interactions with digital archives in the studied user groups. The focus group interviews were between 60 and 105 min in length, averaging 89 min, and were conducted in mid-late 2021. Six of the interviews were conducted in Swedish and one in English. All translations from Swedish to English have been done by the authors. Groups 1–4 ('researchers') were populated by academic researchers employed in the Swedish higher education sector, affiliated with multiple SSH disciplines and engaging in a range of quantitative and qualitative research approaches, with a majority of historians. Groups 5–6 ('popular movement representatives' [PMR]) comprised professionals working in a range of Swedish professional organizations affiliated with the popular movement under study. Digital humanities scientists (DHSs) formed group 7. All participants were in the mid-to-late career stage of their respective domains, which offered the conditions to delve into archival user needs on the basis of deep and multifaceted familiarity with the archival holdings of the popular movement. Table 1 shows an overview of focus group sizes and compositions.

The recruitment of participants was done on the basis of two criteria informing purposive selection: the participants (1) belonged to the main academic and professional stakeholders of the popular movement's digital archives, i.e., academic researchers, professionals working in the organizations affiliated with the popular movement, and DHS; they (2) had a strong and thoroughgoing connection to the popular movement's archives in their scholarly and professional activities, although the degree and nature of this engagement could vary. Experts in various arenas connecting to the Swedish branch of the popular movement in focus in the present paper were consulted to determine the eligibility criteria and identify potential candidates to recruit. The interview data were analyzed by the authors drawing on the constant comparative method,¹²¹ oscillating between the conceptualization of user needs and adjustment of the coding structure as new information emerged from the exploration of the interview transcripts. The validity of the analysis was verified also using negative case analysis,¹²² in which both authors participated.

The results and data collection procedure of this study have several limitations. The main limitation connecting to data collection is the limited size of several of the focus groups. While it is difficult to precisely determine how many participants a focus group should have,¹²³ it is frequently agreed upon that a central offering of the focus group methodology is that it allows the researcher to use the interaction between the group members to better grasp shared sensemaking processes and the negotiations of meaning and significance.¹²⁴ This limitation is, however, mitigated by the fact that the participants included in the present study were 'information-rich'¹²⁵ and extensively familiar with the interview subject matter.

Another limitation is that the study's results are qualitative in nature and have a restricted potential for generalization. Although the range of users of popular movement digital archives is wide and their needs diverse, this study can, on the basis of its comparably extensive focus group study on the needs of key user groups in popular movement archives, address a major knowledge gap in archival science user studies that has potential to both underline and add to the results of previous user studies of professional and scholarly archive use in the popular movement domain and beyond.

Analysis

The focus group interviews focused specifically on user needs in popular movement archives relating to finding records and using records. Interface design needs, needs of search functionalities, and search-result processing functionalities emerged in the interview record as key subthemes of user needs relating to finding records. Record-use needs, on the other hand, comprised support for a wide spectrum of use cases and needs of supporting process

Table 1. The seven user groups participating in the focus group interviews

<i>User group no.</i>	<i>Professional or scholarly identifiers of the participants</i>	<i>Group size</i>	<i>Denominator</i>
1	Researchers in history (2) and literary studies (1) with an interest in the popular movement, its history, and activities	3	Researchers, group 1; 'R1'
2	Researchers in history (1) and business economics (1) with an interest in the popular movement, its history, and activities	2	Researchers, group 2; 'R2'
3	Researchers in history (2) with an interest in the popular movement, its history, and activities	2	Researchers, group 3; 'R3'
4	Researchers in history (2) and literary studies (1) with an interest in the popular movement, its history, and activities	3	Researchers, group 4; 'R4'
5	Popular movement representatives with duties that include archival use for administrative purposes	4	Popular movement representatives, group 1; 'PMR1'
6	Popular movement representatives with duties that include archival use for administrative purposes	4	Popular movement representatives, group 2; 'PMR2'
7	Digital humanities scientists with an interest in using digital archives for large-scale computational analysis of digitized source materials	3	Digital humanities scientists; 'DHS'

documentation and metadata. The findings of user needs of finding records and using records are summarized in Tables 2 and 3, respectively.

Finding records

Interface design needs

Needs related to the interface design of digital popular movement archives not only are to a large extent overlapping across the studied focus groups of researchers, PMR, and DHS but also showcase differences. All seven groups emphasized the importance of an interface with 'robust user friendliness' (R1) that can serve as a link and mediator between users and the records of digital archives (R1–4; PMR1–2; DHS). Recurrently mentioned features of user-friendly interfaces include a simple but professional-looking graphical design centered not principally on showcasing records, but rather on facilitating user access to archival holdings in a way that encourages users to pursue and achieve their search objectives. Here, researchers and DHS (R1; R4; DHS) expressed a stronger preference for an interface that only to a limited extent uses visual means, while a more extensive use of pictures and imagery was considered useful by the PMR1–2. Interestingly, the PMR also noted that the graphic design of the interface should reflect the popular movement and its visual traditions.

A common position is that the interface of digital popular movement archives can engage and accommodate both novice and expert users if its search fields, finding aids, and other points of access into the holdings are presented in a gradual way, where easy-to-use search functionalities are located on the landing page, and more advanced and customizable options are accessible after some additional site navigations. All groups recognized that this would allow novice users to pursue possibly less well-defined inquiries and search strategies without being hindered by a wealth of search options that would require the archival experience and domain knowledge of an advanced user to be employed with good results (R1–4; PMR1–2; DHS). The researcher groups underscored the counter-productiveness of overly complicated interfaces that are difficult to navigate and use (R1; R4). However, while the groups engaged

Table 2. User needs related to finding records

Category	Need	Key user groups with the need
Interface design needs	Robust user friendliness	R; DHS; PMR
	Easy search interface	R; DHS; PMR
	Advanced search interface	R; DHS
Needs of search and search-result processing functionalities	Free text search	R; DHS; (PMR)
	Structured search	PMR
	Thematic search	R; DHS; PMR
	Results filtering	R; PMR
	Archival finding aids	R; PMR

User groups referenced within parenthesis signify that the associated need is present to a lesser degree. PMR, popular movement representatives; DHS, digital humanities scientists.

Table 3. User needs related to using records

Category	Need	Key user groups with the need
Needs of record use	Historical documentation: Historical research and knowledge	R; (PMR)
	Historical documentation: Education	R
	Historical documentation: Decision support	PMR
	Records as data	DHS; (R)
	Knowledge exploration	R; PMR
	Downloading records contents	R; PMR
	Downloading records as data	DHS
Needs of process information and metadata	Archival provenance and organization	R; DHS; PMR
	Processing information	(DHS)
	Related records and information	R; (PMR)

User groups referenced within parenthesis signify that the associated need is present to a lesser degree. PMR, popular movement representatives; DHS, digital humanities scientists.

in research (researchers, DHS) placed a larger emphasis on digital archive interfaces offering more immediate access to rich search and filtering options, the groups consisting of PMR more strongly stressed the importance of the interfaces presenting, allowing access to the more advanced features of the archives in a step-by-step fashion with simpler decision paths and parameter deliberations (R1; A4; PMR1; DHS).

Needs of search and search-result processing functionalities

All seven focus groups articulated that the needs pertaining to search and search-result processing functionalities of digital popular movement archives are of great importance because they underpin the core offering of such repositories: to make digitized records of the popular movement findable and accessible. Four principal implementations of search and results-processing functionalities were requested. These were free-text and thematic search-options, results filtering, and access to the holdings on the basis of archival knowledge organization principles, including finding aids. Useful free-text search functionalities corresponded to a large extent across the participating focus groups and included concepts and entities ('strike', 'lockout', R2;

also R1; R3; DHS; PMR2), the proper names of individuals (authors, people mentioned in the materials) and geographic locations (DHS; PMR2), and the time of publication or creation (R4; PMR2; DHS) of the archival record. PMR more strongly emphasized the need to being able to search for the titles of specific documents (PMR1–2), while researchers and DHS discussed their use of free-text search options in more exploratory terms (R2; R3; DHS).

Commonly mentioned thematic search functionalities and filtering options mirrored the free-text search capacities to a large extent: browsing and filtering on the basis of organization, temporal thematizations, and geographic mappings of documentary points of origin were requested (R1; R2; PMR1–2; DHS). Additionally, some interviewees expressed the need for content-based thematizations as a means of navigation. These thematizations (e.g., popular movement cultural expressions, educational policy, the labor market, social issues; R1; PMR2) were seen as a way of guiding users to recognize interesting and relevant topics available for exploration without requiring the formulation of keywords or search strings in use scenarios where searchers are lacking basic archival, platform, and domain knowledge. Researchers and popular movement officials acknowledged it is difficult to find a reasonable approach to group archival materials according to their contents (R1; R4), while the DHS suggested that this could be done by applying computational methods like named entity recognition (DHS). In the researcher focus groups (R1; R2), the thematizations of content as a search functionality were contested to the point of being characterized as detrimental to the usefulness of digital archives. Speaking from the viewpoints of both researchers and educators, several interviewees in the researcher focus groups considered useful content grouping as possible to achieve only from singular particular perspectives. These interviewees expressed concerns that pre-made content-based thematizations of archival materials might obfuscate, for new users, the importance of approaching archival search as a purpose-led and innately exploratory process. In contrast to thematized groupings of archival records as an entry point into the holdings of digital popular movement archives, both researchers and DHS understood free-text search results supplemented with suggestions of expanded search terms based on estimated semantic relevance and co-occurrence frequencies in the searched holdings to be useful additions (R1; R3; R4; DHS).

Several focus groups, however, agreed that there is a need to be able to use established modes of searching and finding archival records also in digital archives. All groups of researchers, DHS, and PMR underlined the usefulness of provenance information, which was seen to support several tasks ranging from search and search-result processing, user interpretation, and understanding of the organizational context of archival materials, to serving as a point of entry to the digital holdings themselves (R1–4; PMR1–2; DHS). Researchers and PMR requested detailed provenance information (section numbers, names of sub-organizations and sub-associations, chain of custody, including notable events), while the DHS had more basic needs of provenance information (R1–2; R4; PMR1–2; DHS). The groups of researchers and PMR pointed to the usefulness of digital popular movement archives, offering a genealogy of the organizations whose records they keep, pointing to the complex organizational history of the domain that is difficult to overview even with many years of academic or professional experience (R2; R3; R4; PMR2). Moreover, particularly in the researcher focus groups, prevalent modes of pre-digital archival organization of provenance information seem to have impacted user expectations also in the sense that prevalent ways of organizing materials in physical archives were described as a means to achieve effective browsing of digital archival holdings (R1–3). Several reasons were put forward supporting why the document type-based archival organization scheme would be needed in digital popular movement archives. The scheme was understood as being proven to function well also when used to organize and navigate large archival holdings (R2), and using the scheme to search for records is already a part of the skill set of historians invested in archival research with respect not only to searching

and search-result processing (R1–3) but also to writing references to archival records in a mode that is well-established in the community of academic historians (R1–4).

Using records

The analysis also highlights multiple needs related to records use, metadata, and process information for users. The main categories of identified needs are summarized in Table 3.

Needs of records use

Beyond needs related to how users find records in digital popular movement archives, the results show a wealth of needs of record use that are to different extents shared across the focus groups. These needs of record use emerge as intertwined with needs of process information and metadata that facilitate and, in some cases, pivotally underpin record usability.

Two overarching record use needs were expressed in the interviews. The role of digital popular movement archives in the professional activities of researchers (R1–4) and PMR1–2 was tied closely to knowledge and knowing of historical occurrences (i.e., using records as historical documentation). The DHS, on the other hand, approached the archive as a part of the methodological chain of large-scale data collection and processing (i.e., records as data). The record-use needs of researchers and PMR, however, display substantive distinctness on a more specific level. The record-use needs of researchers pertain to scholarly research and educational applications (R1–4), while the principal use needs of PMR are to find documentation of past events and decisions of relevance for current objectives and happenings within the popular movement (PMR1–2). The researchers' use of records relates to the work of furthering current research tasks by finding records that could inform about the topics and themes under exploration (R1–4). The researcher focus groups also deemed records from digital popular movement archives to be usable for research initiation tasks, including the testing of hypotheses and the refinement of research questions. The quick iterations of forming research objectives and tentatively exploring the objectives in the archival holdings afforded by digital access to popular movement archives were understood to be very useful in accomplishing such tasks (R1; R3). The needs relating to educational use of the researcher user groups mirror the needs connecting to research initiation in the sense that the immediacy of use in digital popular movement archives was also understood to benefit first-cycle students without previous archival experience by lowering the bar for conducting archival research (R2; R3).

The use of records in the focus groups of PMR has significantly less to do with obtaining insight into historical events within the framework of scholarly knowledge. Instead, the main record-use needs relate to identifying, tracking, and learning about issues within the popular movement of the inquirer or a closely affiliated union or popular movement organization (PMR1–2). While historical information was valued also for its own sake by PMR, the most commonly occurring record-use needs are more closely connected to informing and otherwise facilitating present-day ongoings in popular movements by delving into past decisions, work processes, debates, and other events. In comparison with the researcher user groups, the stronger focus of record-use needs on organizational matters and issues may be explained by the strong influence of certain historical events, like decisions and the different stances taken by popular movements and other popular movement organizations in high-profile policy issues on the national level that determine the current affordances of action (PMR1–2). Immediate finding, accessing, and using of records in digital popular movement archives were also considered to facilitate the record-use needs of PMR. Similar to the viewpoints expressed by the researcher focus groups, the main facilitating element was the ability to access the archival holdings without having to physically visit archives and less that using digital archives was felt more purposeful or easy (PMR1–2).

Several record-use needs in digital popular movement archives are shared by researchers, PMR, and DHS. All groups conveyed that one of the main advantages of using the digital popular movement archives as a site of research, inquiry, and data collection is that its holdings allow for the exploration of how concepts, discussions, activities, and other facets of popular movement organizations developed and changed over time because of the long series of records kept there (R1–4; PMR1–2; DHS). No user group stressed that they had a need for the archival records to be digitized in extremely high resolutions in order to accomplish their record-use goals. The key consideration was that the digital scan must be of sufficient quality to be read with ease (R2; R3), although it was recognized that resolution needs may vary from use case to use case (DHS). Another likeness in record-use needs that nevertheless also shows a degree of divergence between the focus groups pertains to the groups' workflows. Transcriptions of printed and handwritten (produced via optical character recognition, OCR, and handwritten text recognition, HTR) records made available via digital popular movement archives in conjunction with digitized versions of the records were understood to be useful for both historical inquiry, investigation, and educational purposes (R1–4; PMR1–2) and computational applications (DHS). In contrast, the researcher focus groups more strongly stressed that access to the digitized records – with or without transcriptions – is the offering of greatest value among all of the features of digital popular movement archives (R1; R2). PMR and DHS expressed a less uniform view of the matter (PMR1–2; DHS).

Further similarities between the groups exist in the modes of access and use of archival records. While being able to analyze and work with records on screen was a seldom expressed need (R1; R3), the analysis shows that much emphasis is put on the importance of a digital archive having accessible and powerful functionalities for downloading records to personal workstations (R1–4; PMR1–2; DHS). The focus group interviews show that downloading records is fundamentally important for all groups because it facilitates using records according to users' personal preferences and habitual, work-task-specific workflows. Such workflows vary across and between different users and uses. The researchers and DHS demonstrate many reasons for why having comprehensive download options is an important feature of the archive, ranging from increased ability to manage storage and access to the records (R1–4), facilitating the organization of records, excerpting, and markup (R1–4), to offering better opportunities to work with and analyze the records using the methods and software of choice (R2; R3; PMR1–2; DHS). Researchers oriented toward quantitative methods, and the DHS underlined the importance of archive download features supporting the export of entire corpuses of records (R3; DHS) – including API support (DHS). This is in contrast to PMR and researchers that work with qualitative methodologies who didn't foresee such needs for themselves. A similar segmentation can be observed in the export file formats requested by the focus groups. Principally qualitative record uses were seen to be supported by, e.g., text documents (R4; PMR1–2) and PDF (R3; R4; PMR1; PMR2; DHS), whereas qualitative approaches required tabular data and machine-readable data outputs like CSV and XML (R3; R4; DHS).

Needs of process information and metadata

In parallel to needs relating to records use, there is a need of process information and metadata *about* the records. In this context, *metadata* signifies information about the records and the archival holdings of popular movement archives. *Process information*, or *paradata*, is information that describes the means, motivations, and methods by which, e.g., a record, a digital reproduction of a record or a collection of records came into being. The focus groups' needs for metadata and process information are often intertwined and difficult to separate from each other. They both address digital popular movement archive users' need to be able

to understand and gauge the usability of records and repositories for the different purposes of their work (R1–4; PMR1–2; DHS).

One of the interviewees expressed a common position concerning the need of process information in popular movement archives when stating that, while he ‘honestly didn’t care too much about how the digitization [had] been technically performed’, it was/is very important to know ‘where [a digitized] record comes from, [and] what its place is in relation to the rest of the archival holdings’ (R3). Little interest was expressed across all focus groups in technical process information describing how the digital popular movement archives and the digital reproduction of records found therein were produced; this is because of a widespread trust in the institutions and their workflow of digitizing records (R1–4; PMR1–2; DHS). It was however noted that some users might require information about what hardware and software that had been involved in creating the digitized archival holdings (DHS; R4). Process information about how the records were organized and selected for inclusion and what organizations or institutions that enacted the selection was, on the other hand, generally deemed to be of great importance for rendering the records of popular movement archives possible to interpret and use (R1–4; PMR1; DHS). Information detailing the relationship between the records in the digital archive and the totality of records in the archive holdings that the digital copies were drawn from was also understood to be very important so that users can know what records they can expect to find in the digital archive and what records they might have to access on-site in an archive (R1; R2; R4). Another pivotal facet, also with relevance for facilitating users understanding the contents of digital popular movement archives, is that information has to be made available detailing additional and planned ingestions of new records into the archive (R1, R4).

The seven focus groups additionally had item-level metadata needs. Researchers and PMR viewed archives and archival holdings to be interconnected and expressed the need for archive- and holding-level metadata to render networked features of archives and archival records useful to the maximum extent (R1–4; PMR1–2). Although having in part different archival interests and investments, these groups recognized that the records in digital popular movement archives can inform about and serve as entry points into also other types of archival records held by other archives. The focus group interviews also indicate that it would be useful for digital popular movement archives to communicate also about archives that have no tangible record- or holding-level relationships to themselves but exist within the same or a related domain (R3). Another instance of this ‘networked’ perspective on digital popular movement archives, expressed by researchers and the PMR, is that they perceive a need to tie the professional expertise of archivists into digital popular movement archives via holding-level metadata. What archivists know is considered to be indispensable in facilitating finding and using records, and the main role of digital popular movement archives is principally to allow the user to formulate more informed questions and inquiries when consulting available repositories and their staff of archivists (R1; R3; TUP1). In the same vein, it was suggested in the focus group interviews that it would be useful for digital popular movement archives to connect to the organizational metadata (finding aids and metadata schemas) of different popular movement repositories, as this would allow their users to access the human resources and records available in affiliated holdings and not just those directly involved in the digital archives (R4).

Discussion

The findings nuance and provide new information about user needs regarding digital popular movement archives. Concerning the nature of the studied archive, this study shows how the Swedish popular movement archives are characterizable as community archives with a

pronounced mandate to reach out to their communities and extend their ambit beyond professional and amateur researchers. However, at the same time, they are custodial archival institutions with a strong mandate to preserve and keep physical documents.¹²⁶

The findings show how needs often focus on archives and archival records rather than technology (the digital archive). Needs also tend to extend beyond accessing records to diverse information, management, social, personal, and technology-related wants and wishes. Furthermore, some of the needs – typically that of accessing records – are more central to the users than others. In parallel, the findings show how the purpose of using a digital archive and expertise in the context within which it is used rather than, for example, membership in a specific group is central to how user needs evolve.

Unsurprisingly, many of the individual needs identified in the analyzed focus group interviews parallel with those of earlier investigations of user needs of digital archives and libraries. The focus group participants called for intuitive and easy to use finding aids and functions¹²⁷ and help in orienting in the archive, what is available and excluded.¹²⁸ Also, the experienced usefulness of searching full-text in a digital archive and the difficulty to know if the search has been comprehensive parallel with earlier observations.¹²⁹

Users have multiple types of needs relating to archive and digital technology

Comparably to how the earlier literature has identified a range of motivations to use archives and cultural collections,¹³⁰ the present findings point to a diversity of potential needs relating to a particular digital archive. The analysis of the focus group discussions showed particularly how: (1) many of the user needs focus on archives and archival records rather than technology (the digital archive) and (2) they extend to a variety of information, management, social, personal, and technology-related wants and wishes beyond accessing records.

First, many of the *user needs focus on archives and archival records rather than technology*. While the findings show that digital technology can empower users to approach and exploit archival holdings in new ways in comparison to a paper archive, user needs focus on understanding records, and how they are organized rather than the technology itself. This corresponds with earlier observations that users tend to be more interested in records than record catalogues,¹³¹ even if records often are in different ways enmeshed in archives management systems and practices to an extent that accessing and using a record requires a thorough understanding of how archives are managed.¹³² While the focus group participants acknowledged the usefulness of thematic subject indexes and automatic subject indexing, they were critical of their shortcomings and generally highlighted the usefulness of traditional archival search facilities.¹³³ Only the interviewed DHSs expressed direct interest to digital archival infrastructure. For others, the technology was clearly of secondary interest. This difference can possibly be explained by the different roles accessing the archives played in the work practices of the interviewed user groups. Researchers and PMRs are principally interested in the content of records, while DHSs more often engage with digital archives as a repository to be mined and extracted for data. It serves as a facilitator, and as some interviews showed, it also as a possible hindrance. For example, the system might turn to a barrier if it hides the context and archival order of records and does not help users to understand what kinds of records they are interacting with, what is their archival and organizational context, how they are linked to other records and activities, and what material is available and unavailable online and in the physical archive.

Second, the findings show that *user needs diverge, overlap, and extend beyond accessing records to diverse information, management, social, personal, and technology-related wants and wishes*. The analysis shows that an archive can fulfill, and a digital archive can facilitate, and a

range of different needs are only partly related to information retrieval and knowledge making. In an earlier study, Gilliland and McKemish¹³⁴ identified record-keeping rather than information needs as a key reason of working with a community archive. In the present study, especially for the PMRs, the keeping of records and making them available appeared to have intrinsic value in serving identity and memory needs of the popular movement community.¹³⁵ In contrast, the researchers and especially DHSs tended to be more instrumental in how they approached the digital archive for the purposes of accessing records and information. The personal and social non-informational-related needs were perhaps most explicitly discussed when the interviewees noted that the user interface needs to give a professional impression and reflect the visual tradition of the popular movement.

Third, the findings point also to *hierarchies between individual needs*. The discussion to what extent the digital archive should support thematic searching points to that the primary need of many focus group participants was to access particular records rather than to use the system to retrieve specific information. The focus group interviews showed also that different types of tasks are associated with different technical needs regarding the digital infrastructure of the archive. PMRs who were proficient with the organization, terminology, and documents in the archive expressed a preference to browsing document titles and graphic representations of the records. Researchers used the interface more for retrieving specific material they needed for later use. Comparably, the PMRs and qualitative researchers asked for a facility to download individual documents, whereas DHSs called for a functionality to sample and download larger corpuses of data based on formal parameters.

Contexts of user needs: Purposes and uses, archive and digital archive, disciplinary background, and expertise

A parallel observation to the apparent multiplicity of user needs is their contextuality. The findings partly align with and partly extend observations in the literature. We found that (1) the needs are underpinned by the purposes and uses of the digital archive rather than users' group membership, (2) there is a tension between using an archive and a digital archive, (3) disciplinary background of the users has indirect influence in their needs, and (4) that contextual expertise influences both content-related and technical needs. These facets differ to a certain extent from how earlier research has categorized users of cultural heritage collections and their needs according to their level of expertise, information behaviors and information needs, and motivations.¹³⁶ Expertise is a factor that applies to all facets, whereas information behaviors and information needs unfold as a sub-facet of purposes and uses (facet 1 above). Motivations relate both to explicit purposes and uses (1), teleological ideas emerging from the disciplinary background of users (2), and the need itself.

First, *a crucial conceptual facet of user needs is that for what purpose and how a digital archive is used in practice*. The findings confirm earlier remarks on how categorizing users is difficult.¹³⁷ Similarly to how Cortada¹³⁸ underlines the parallels between how amateur and professional historians work, the present findings highlight how researchers, DHSs and PMRs, despite differences, often had similar needs and ways of working with archival material. Studies of archival engagement with diverse groups of users by Agosti and Orío¹³⁹ and Borlund and colleagues¹⁴⁰ provide similar evidence. Rather than group membership, in the present material, much of the variety could be traced back to differences in the tasks and purposes of using the archive the users described. For example, doing research on the historical context of popular movement initiatives implied party different needs than using the archive for administrative decision support. The diverging needs for metadata and process information suggest of the same. Such information is generally useful when needed for understanding the archive and its contents but whether such information is required depends on the task in hand. For some

tasks, it might be enough to trust on an archival institution and the adequacy of its digitization process, while sometimes more specific, for example, technical information might be needed.

Second, *there is an evident conflict and complementarity between archives and digital archives in how a digital archive can both facilitate and impede access to the archive and its contents.* Both researchers and PMRs who were well-versed in how archives and the popular movement are organized emphasized that a digital archive works best if it supports accessing archives from the premises of how archives are organized in general. In contrast, DHSs, who clearly were less literate in archival concepts, approached the digital archive more as an information retrieval system or a digital repository. A digital archive could, however, in both cases support users in their needs, especially by providing options to download material for qualitative and quantitative processing on a personal workstation and for exploring links between different records in the archive.

Third, *while the earlier studies suggest¹⁴¹ that an abstract group membership might not correspond with how a user is using a digital archive, the present findings show that it can provide indications of their members' disciplinary backgrounds, teleological presuppositions, epistemic settings, and assumptions of how the digital archive is organized and approachable.* For example, historians tended to want to see the original documents and PMRs organizational information, and DHSs want APIs and advanced export and processing options. Correspondingly, historians conceptualize the archive from the perspective of a historical continuum, popular movement representants from the outset of the organization of the popular movement, and DHSs as data.

Fourth and finally, the present findings show clearly how *contextual expertise is a fundamental underpinning of what the focus group participants found useful and necessary.* Similar to how earlier research¹⁴² has distinguished expert and non-expert users and identified that they tend to have diverging needs and preferences, the present findings evince of the same. The focus group participants were explicitly referring to the need of simple interface functions for novices and more conceptually more advanced and technically powerful options, respectively, for subject and technology experts. The emphasis on the importance of knowing records-keeping traditions and preference of structuring also a digital archive from such premises rather than thematically evinces of the perceived significance of disciplinary epistemic knowledge. In this sense, the attitudes of the focus group participants align with the values of discipline-specific humanities researchers rather than scientists or social scientists¹⁴³ or interdisciplinary researchers who tend to have greater demand for explicit secondary documentation.¹⁴⁴ However, the findings also exemplify how users are sometimes able to compensate for their eventual lack of proficiency in archival terminology¹⁴⁵ and management traditions by their organizational or technical knowledge on the record-keeping entity or the digital archive.

Conclusions

This study shows that digital archive users' needs focus on archives and archival records rather than using the digital archive, and the reasons for accessing a digital archive are broader than merely retrieving information. Furthermore, it was possible to identify hierarchies between individual needs. Some needs, typically accessing records, are more central to the users than others. The findings also show how the purpose of using a digital archive and expertise in the context within which it is used is central to how user needs evolve. A key implication of the apparent complexity of user needs and their underpinnings is to acknowledge the limitations of what Bailey-Ross¹⁴⁶ has criticized as assigning users in broad segments and the resulting abstract categories of user behaviors. While a digital archive can, without much doubt, support a variety of users even if some of their needs are in conflict with each other,¹⁴⁷ we suggest that rather than attempting to address a selection of discrete

outspoken needs, it is more important to be aware of what different expectations and understandings of archives and digital infrastructures together imply for the design of a particular digital archive as whole. The different purposes of using archives for knowledge, meaning, and decision-making; framings of an archive as a repository of records, information, or data; or different understandings of what a digital infrastructure should do, how it should work, and, for instance, what is meant by being able to download something all have consequences. Rather than assuming that a digital archive is a generic information system, it can be more useful to conceptualize functionalities on the basis of how users' are accessing the archive, for example, as downloadable data, browsable collection of visually recognizable documents, information source, or a body of records from a specific activity. Similar to how Bailey-Ross¹⁴⁸ underlines the importance of nuancing the understanding of users and how Mattock and Bettine¹⁴⁹ argue for a similar point in relation to the different types of community archives, we posit that it is equally important to be aware and explicit about what kind of an archive a popular movement archive is for its different users and uses, and when developing a digital archive, what kind of an archive a particular digital popular movement archive is aiming to be and for whom.

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