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Managing the participant

The development of the Digital Archives in Norway

Abstract

The Digital Archives was established in 1998 as The National Archives of Norway's publishing platform for digitized records. In this article, we trace the platform's evolution. Drawing on actor-network theory, we approach the Digital Archives as a socio-technical assembly, and we "follow" central actors involved in its development through a range of published sources. We identify three phases: first, a prehistory in which digitization was conducted by several categories of actors, including universities, commercial actors, and archival institutions; second, a phase in which The National Archives became pivotal by enrolling earlier projects into the Digital Archives and mobilizing new contributors to expand the collection; and third, a phase in which the Digital Archives became a publishing platform and a digital repository for the entire Norwegian archival sector. This phase is addressed only briefly in this article. Non-archivists – historians, genealogists, volunteers, and commercial actors – have been important throughout. Archival theory suggests that while participation can benefit archival institutions, it also entails the risk that non-professional contributions may undermine the trustworthiness of records and, ultimately, of institutions that deploy participants. We argue that The National Archives has used various means, including proofreading regimes, standardization, and separation, to pursue the benefits while mitigating risks – i.e., to manage participation. Conceptually, we interpret these as programs of action aimed at securing authenticity and trust in the records. We also argue that The National Archives manages participation rhetorically by downplaying the heterogeneous origins of the Digital Archives.

Keywords: archives, participation, digitization, Digital Archives, Norway, actor-network theory

Introduction

On January 23, 2023, a birthday was celebrated at The National Archives of Norway – the Digital Archives (Digitalarkivet) turned 25. A web article highlighted the changes that the 25-year-old had gone through. According to the article, it started as a publishing platform for digitized material from

The National Archives in 1998. The 25-year-old is much more: a publishing platform for all institutions that hold archives; a digital repository for any public body that desired it; and a records centre where administrative bodies like the Tax Administration can access information that is not publicly available. The web article concluded that "the Digital Archives is 25 years old and continuously evolving" (Digitalarkivet, 2023; all translations of Norwegian sources are the authors').

In a recent study, Bastiansen (2023) examines digitization in Norway's National Library as mass digitization based on an "infra-politics" where regional policy, industrial policy, and cultural heritage management converge. The National Library was established in the small-town Mo i Rana a few years after a large ironworks closed. The basis in an industrial town was favourable for rapid digitization – old production lines were easily transformed. This article explores the way towards mass digitization of archival records in Norway, more specifically the development of the Digital Archives. Although it is possibly Norway's largest cultural website (Arkivverket, 2019), the platform's history has, to our knowledge, barely been studied scholarly.[1] Influenced by actor-network theory, we approach the Digital Archives as an assembly of heterogeneous entities. We focus on human actors in the assembly. In particular, we are interested in the role of non-archivists in developing the Digital Archives. Collaboration with non-archivists is a striking trait of the platform. Contributions from volunteers are encouraged already on the front page of the website (https://www.digitalarkivet.no/), and one of us has also participated in transcription as a volunteer. The Digital Archives was established as a joint project between The National Archive and the University of Bergen (UiB), and a white paper on digitization remarks that material from UiB constituted the "start-up capital" when the Digital Archive was established (St.meld. 24 (2008-2009), s. 38); this indicates a different history than the web article celebrating the 25th birthday in 2023. At the same time, the nature and extent of non-archivists' contributions are not well known. Thus, our first research question is: *What has been the role of non-archivists in the development of the Digital Archives?*

Some archival scholars argue that while participation can fertilize archival institutions, which have traditionally been less extroverted than sibling libraries and museums, it also entails a risk. Records that cross the archival threshold gain status as authentic and trustworthy, safeguarded by archivists' professional knowledge and ethics (Duranti, 1996). This is the core in a social contract between archival institutions and the public, and participation from non-professionals can potentially pollute this (Yakel, 2011). Thus, our second research question is: *What measures has The National Archives taken to realize the benefits of participation while minimizing the risks?* As we return to in the literature review, what the benefits and risks are may vary. In the case of the Digital Archives, the motivation to deploy participation is mainly to increase the volume of digitized records, and the main risk is that digitization by non-archivists lead to records of lower quality.

We focus on the period leading up to the 25-year jubilee in 2023. The Digital Archives' history after this is a story in the making, which will be important to tell later. We do, however, trace the history further back than the formal establishment of the Digital Archives in 1998.

[1] A search in the database Library, Information Science & Technology Abstracts for *Digitalarkivet* conducted in November 2025 returned no results. Search for *digital archiv* AND norw** returned 14 results; mostly about Norwegian libraries, none were about the Digital Archives. A Google Scholar search for texts with *Digitalarkivet* in the title returned three results, all bachelor's theses that study aspects of the platform's useability.

Literature review

Digitization

It has been claimed that we are in the era of mass digitization (Thylstrup, 2019), and digitization has been a central topic in the library, archives and museum (LAM) fields over the last decades. Digitization has obvious advantages. In the Norwegian context, it has been described as democratizing – it provides access to cultural heritage for people who cannot visit LAM institutions during office hours (Bastiansen, 2023, Lande, 2022). This is particularly true for archival institutions, that hold unique material that is not found anywhere else.

At the same time, digitization creates challenges. First, the "aura" of objects or documents is lost; the experience of standing before an authentic time capsule is weakened. Digitization can also lead to loss of contextual information. For example, traces of use may disappear, or information about the size of records may be lost (Rekrut, 2014). Ringel and Rival (2021) emphasize that digitization is a socio-technical process that always involves choices. How, for example, digitize a photograph that is torn in two, or the blank pages of an author's diary?

While digitization was previously primarily thought to imply only information *loss*, it is today recognized as a qualitative transformation where some properties are lost while others are gained. Røssaak (2022) remarks that digitized material has other affordances than analogue. Digitization erases the material properties of objects but simultaneously offers new possibilities, such as zooming in and out, or searching for and compiling information objects in different ways. Hansen and Sundqvist (2012) draw on medium theory and show, through a comparison of two Swedish archival projects, that remediation is not only about *de*contextualization – it also facilitates *re*contextualization.

Digitization can also alter the way users access records. Traditionally, retrieval in archives has occurred top-down, through inference about individual records from a description of the administrative and archival history and an overview of aggregated record in archival descriptions. According to conventional archival doxa, this top-down approach makes it possible to interpret individual records in their proper context, and it supports their authenticity (Zhang, 2012a). In digital archives, institutions can choose to highlight individual records or organize the collection thematically in ways that have not traditionally been considered the best way to give access. Zhang (2012b) describes this as an ethical dilemma between maintaining archival quality and providing easy access to content that users want.

Participation

Participation has become a buzzword in archival studies as in other fields. Cook (2013) even claims that participatory archiving, where archival institutions in various ways collaborate with lay actors and communities, constitutes a new archival paradigm. At the same time, the term is used in many ways. In an analysis of archival scholarly literature, Huvila (2015) identifies nine different participation discourses, with none holding hegemony.

In an attempt to clarify the heterogeneous "participatory paradigm", Jansson and Huvila (2019) propose three sociological perspectives to understand what archival institutions can achieve by inviting users to add comments and tags; we assume that their arguments are valid also for other kinds of participation.

One perspective concerns the politics of representation. Jansson and Huvila associate it with Michel Foucault, but the perspective is also reminiscent of the classic article by Duff and Harris (2002) about archivists' monopoly on creating access points to archives, where the authors argue that archivists'

privilege should be kept in check by allowing others to add to the description. According to Jansson and Huvila, an implication of user participation aimed at reducing biases may be that the opportunity to edit or remove user information is reduced. Any moderation can be seen as an exercise of power that undermines the symmetrical relationship that this participatory logic aims to achieve.

Another perspective concerns building and spreading cultural and social capital; Jansson and Huvila draw on Pierre Bourdieu. In this perspective, the purpose of allowing users into the archives is not only to improve the quality of the collection. It is also about using archives as a means to support social integration and positively influence community identity.
The Canadian *Project Naming* illustrates both these logics. Project Naming is a collaboration between Libraries and Archives Canada (LAC) and the organization Nunavut Sivuniksavut. The goal is to identify individuals from the First Nation population in LAC's photo archives who, in a colonial spirit, are labelled "Inuit man," "Inuit girl," etc., through, inter alia, conversations with older members of the community. For LAC, this is a postcolonial manoeuvre that makes amends for previous discrimination. For Nunavut Sivuniksavut, it is an opportunity to strengthen bonds between different generations within the community (Bak, Allard & Ferris, 2019).

The final prism that Jansson and Huvila suggest is an economic perspective. Here, participation allows the institutions to develop their collections beyond what regular funding does. Volunteers are mobilized to identify pictures, create alternative search entries, or digitize analogue material that archival institutions cannot afford to do themselves. An example is the British National Archives' (TNA) *Discovery* service, where users can add tags to the catalogues to provide alternative access points to the archives than what the hierarchical descriptions offer. According to Jansson and Huvila (2019), a challenge with user participation for economic reasons is that users typically do not possess the same professional expertise as archivists; this can affect the quality and, consequently, user satisfaction.

Similar observations are made by others. Gorzalski asserts that user-created metadata "*blurs the divide between institutional metadata and user knowledge. Allowing users to describe content in their own terms can enhance access but could result in unintended consequences such as misinformation and conflicting metadata*" (Gorzalski, 2013, p. 2). Yakel (2011) asserts that when records cross the archival threshold, it is archivists' cognitive authority, based on knowledge about arrangement and description of records and a professional ethos, that warrants their authenticity and trustworthiness. At least theoretically, participation by non-archivists undermines this social contract between archival institutions and their audiences. Yakel points out two main strategies that archival institutions have used to allow user input without jeopardizing their authority. One is moderation, i.e., editing content**.** Another is separation, where user input is published in conjunction with the institution's platform, yet set apart. Again, the British National Archives provides an example. In 2007, TNA created a wiki where the public could post information about records they were interested in, with cross-references to TNA's digital catalogue. The wiki was discontinued in 2012 because *"it doesn't fit with the seamless user experience that we want to provide"* (The National Archives UK, 2012). The same year, the new web catalogue Discovery was launched. Here, user participation is found on the same web page as TNA's description but reduced to tags. A qualifier that tags are not verified and must be used at the user's own risk still differentiates user input from information provided by TNA, even though they are now found on the same web page (The National Archives UK, n.d.).

Analytical approach

Methodologically and analytically, we are influenced by actor-network theory (ANT). ANT is a framework for studying science, technology, and society "symmetrically," i.e., without giving primacy to either nature or society. Instead, technoscientific and social phenomena are seen as networks or

assemblies of heterogeneous entities. A central idea is that entities are defined by their relations with other entities in the network, and thus change when the network changes, for example, through the inclusion of a new technology. The process of establishing relations between entities and aligning them in a network is called translation (Callon, 1986; Latour, 1999, 2005). Although agency is not a human prerogative in ANT, the translator is typically a human entrepreneur or scientist, and ANT has been criticized for promoting a managerialist view (Asdal, Brenna & Moser, 2001).

While we do not adhere to every aspect of ANT, we note that records are easily recognizable as hybrid "immutable mobiles" that fixate human actions and allow them to be transported across space and time in a way that actions usually cannot (Ketelaar, 2008). Record-keepers, therefore, operate at the interface between society and artefacts. Moreover, creating a digital platform where analogue records are made accessible digitally for easier and novel uses certainly entails assembling heterogeneous entities. However, with one exception, which we return to in the discussion, we have only looked at the human actors involved in the network, i.e., organizations and individuals.

A central methodological maxim in ANT is "follow the actor" (Latour, 1987, 2005). The rationale is to avoid prejudices about who has the power to influence others, and instead study hybrid phenomena empirically in an "agnostic" fashion (Callon, 1986). This principle has influenced us methodologically and guided our empirical investigation. We started with literature we consider clearly central to and authoritative in the history of the Digital Archives, such as annual reports from The National Archives and their own historical accounts, and central white papers from The Ministry of Culture. Here, we noted any shift where new actors – i.e., participants in a broad sense – appear. In the next step, we followed these actors as far as we deemed necessary to understand their significance for the Digital Archives. This led us to scientific literature, Festschrifts, magazines for genealogy organizations, local newspapers, discussion forums, and so on. While all the sources we have used are published, many are not easily available, and they have never been examined collectively before.

In the discussion of our second research question, we particularly use the concepts program or program of action and its counterpart anti-program. Briefly put, a program is anything that supports the project that a translator wishes to have other heterogeneous actors comply with, while an anti-program is anything that threatens the program (Latour, 1991, 1999). Typically, programs are delegated to technological devices. Latour's (1991) simple example is a hotel owner who wants guests to leave room keys at the reception desk when going out. A polite request or a written sign helps a little, but not much. A large metal weight attached to the key makes the program 'leave the key at the reception' much stronger. An example closer to our case is protocols for astronomical observations for participants in citizen science projects (Kasperowski & Hillman, 2018).

In this light, Jansson and Huvila's (2019) logics of participation can be seen as programs that institutions aim to achieve by opening up for participation: collections with greater legitimacy because they represent multiple perspectives in the political logic, increased social and cultural capital in a community in the social logic, or more resources for the institutions in the economic logic. Similarly, the risks they point out, such as increased politicization or lower quality due to a lack of professional knowledge, can trigger anti-programs that cause participants to leave the project and ultimately lose trust in the institutions.

The Development of the Digital Archives

Origins

Digitization is one type of remediation; another is microfilm. Microfilming of archival records in Norway began in the 1940s when The National Archives photographed historical records located in

Danish archives. (While the method was new, reproducing material in Danish archives was not. In 1875, one of in total five employees in The National Archives lived in Copenhagen, primarily to copy records documenting Norwegian affairs in the Danish National Archives (Svendsen, 2017).)

Microfilming involving an external actor started in 1945, when the American Church of Jesus Christ of Latter-day Saints, i.e., the Mormon Church, approached The National Archives with a request to microfilm Norwegian church records. Mormons believe that family relationships on earth remain in the afterlife, and that deceased relatives who were not baptized in the church can be baptized by proxy and saved from perdition. Mormons have therefore established a genealogical resource centre, the Family History Library, in Salt Lake City (Minert & Leishman, 2015). National Archivist Asgaut Steinnes accepted the Mormons' proposal, on the condition that The National Archives retained the original microfilms. The agreement was not without controversy. The Church of Norway reacted, and Oslo's bishop Eivind Berggrav wrote: *"does Norway sell its ancestors' names and honour for such a price?"* (in Warberg, 2006, pp. 11-12). The bishop urged the Ministry of Church Affairs and Education to finance microfilming so that The National Archives should not rely on the Mormons. The Mormons' microfilming eventually resulted in approximately 7 million photographed pages. In addition, The National Archives continued their own microfilming (Svendsen, 2017). We will return to the microfilms later.

Digital archival remediation began in the late 1960s. Several categories of actors eventually contributed to this. The first initiative did not come from archival institutions, but from academic historians interested in historical demography. Digitizing registers such as censuses facilitates both studying demographic development and tracking individuals and families over time (Sommerseth & Thorvaldsen, 2022). The earliest of these projects was the so-called 1801 project, initiated at the Department of History at the University of Bergen (UiB) in 1969 to transcribe the 1801 census. Jan Oldervoll, a key figure in the project, later said that it was like *"the old method of teaching people to swim: throw them into the sea and pull them up just before they drown"* – in this way, they learned to program (Oldervoll at Digitalarkivet, 2008). The 1801 census became available to the public in the 1970s, first on paper and micro-cards, and finally on the Internet in 1995 (Nedrebø, 2004).

National Archivist Dagfinn Mannsåker was part of a steering group for the 1801 project (Oldervoll, 1994). Beyond this, The National Archives did not play a significant role until 1975, when it, through regional branch The State Archives in Bergen, joined UiB in digitizing emigrant protocols from Bergen from 1874-1924. The State Archive secured funds and proofread the transcriptions, while the Department of History handled transcription and technology (Nedrebø, 2000). Apart from the regional branch in Bergen, The National Archives remained lukewarm towards digitization for some time. An IT department was established in 1983 and started working in several directions. Digitization was, however, not among these. Trond Sirevåg (2002, p. 304), later head of the IT department, writes that *"[f]rom the academic community, there was strong pressure to get The National Archives to carry out more digitization projects of similar type [to the 1801-project]. It didn't happen..."*

Historical demographic studies were also conducted at the universities in Oslo and Tromsø, and in 1981, the Registration Unit for Historical Data (RHD) was established at the University of Tromsø. RHD was led from the University of Tromsø, but also had a registration unit in Målselv, some 130 kilometres away, where former telephone exchange employees were employed for actual transcription. RHD initially worked with Norwegian censuses from 1865, 1875, and 1900, and parish registers from Troms County (Sommerseth & Thorvaldsen, 2022). RHD today operate the website histreg.no, where openly available demographic information is combined with newer, classified demographic information that can be made available for research purposes.

Traditionally, archival institutions had primarily been oriented towards academic use. In the 1980s, they began to pay more attention to so-called "popular users" such as genealogists and local historians, in addition to professional users like academics and bureaucrats (Sundqvist, 2007). This is reflected in the history of the Digital Archives, where new actors that may be labelled popular users emerged in the late 1980s.

Dovre Data Archive was a project established in the mid-1980s to digitize historical sources from Gudbrandsdalen. An additional goal was to create jobs in the rural area. The project was supported by several public agencies, including a local archival institution and an employment office, and received funding from a state program established to create jobs (Bekken, 1986). After a few years, Dovre Data Arkiv continued as a private company run by local history aficionado Ola Tovmo. Tovmo transcribed records, developed software for transcribing census data, and assisted other local historians and genealogists (Vigga, 1989).

In 1990, the organization DIS-Norge[2] was established. DIS-Norge was initially not active in digitization but became an important user group and would later come to participate more actively. Even before DIS-Norge was established, a digital bulletin board where demographic data were shared was created (Aabøe, 1990).

Some years later, a commercial actor entered the scene. When the state telephone agency Televerket was privatized in 1994, many state employees became redundant. In an effort to find new jobs for this group, Teleslekt[3] was established – initially with around 60 employees across the country. The idea was that former Televerket employees should transcribe archival material and be self-financed by selling data to genealogists. They received training from and collaborated with RHD on the 1865 and 1900 censuses. Data sales were done, inter alia, via paper booklets and a telephone service where users could have genealogical searches conducted over the phone (Nygaard, 1998).

Thus, by the early 1990s a number of stakeholders were working on digitization. In 1993–1995, the standard HISTFORM was developed to provide guidelines for transcribing censuses. The work was led by a committee that included all the categories mentioned above – The National Archives; academics from the University of Oslo, UiB and RHD; and Teleslekt and Dovre Data Archive. An internal working group consisted of representatives from University of Oslo, RHD, and Dovre Data Archive (Histlab, n.d.).

Towards the end of the 1990s, then, there existed some transcribed material, and there was an interest in the material both in academia and among genealogists and local historians. However, there was no reliable infrastructure. Teleslekt was transferred to The National Library in 1996, but the project proved not to be economically viable, and in 1997, it was decided to shut down Teleslekt (Nedrebø, 2002). In this unclear situation, The Norwegian Genealogical Society criticized The National Archives for not engaging sufficiently in saving Teleslekt (Genealogen, 1998). In the autumn of 1997, Oldervoll from UiB approached the State Archives in Bergen about establishing "The Digital Archive." Oldervoll and Yngve Nedrebø at the State Archives succeeded in convincing National Archivist John Herstad to support the idea. Herstad, in turn, persuaded the Ministry of Culture to bless the project.

[2] Short for "Databehandling i slektsforskning" (Data Processing in Genealogy), today known as Slekt og Data (Kin and Data).
[3] An English translation could be Tele-Kin

Establishment of the Digital Archives

The Digital Archives formally opened on January 23, 1998, as a joint project between The National Archives and UiB with a scope of three years. The website quickly became popular and had around 10 million searches in the first year (Nedrebø, 2018). In November 2002, The National Archives took sole responsibility. Organizationally, the Digital Archives became a department at the State Archives in Bergen (Arkivverket, 1998). Teleslekt's departments in Voss and Stavanger were transferred to The National Archives and continued to transcribe.

Initially, the Digital Archives was dominated by material from Bergen, primarily the 1801 census. In spring 1998, the censuses for 1865 and 1900 were transferred from Teleslekt to The National Archives and published on the new platform. During the spring, agreements with other actors were also made. This provided access to, inter alia, emigrant records and parish registers from Sogn and Fjordane County Archive, one of few municipal institutions engaged in digitization at this point (Urtegaard, 1998; Nedrebø, 2002**)**.

In the following years, the collection increased in other ways – several of which involved new forms of participation. Early on, users requested an opportunity to publish material they had digitized on their own initiative. The solution was to establish the *Digital Inn* (Digitalpensjonatet), a virtual area connected to the Digital Archives, in 1999. Here, organizations and individuals could contribute material in their own "rooms" where they were "guests." Material in the Digital Inn was searchable in the Digital Archives' general search but still separate. Pages from the Digital Inn were marked with "DP" in the URL, and the digitizer was credited. Guests at the inn owned their material, but the Digital Archives had an editorial role, required the material to be transcribed accurately, and could remove material that did not meet the requirements (Clausen, 2001). Engagement from the public also led to another innovation. The National Archives received many similar questions from users. Therefore, a discussion forum was established on the Digital Archives in 1999, where users could assist each other. After a few years, users answered around 80 % of all questions (Nedrebø at Digitalarkivet, 2008).

Yet another innovation became important in the further development. In 2001, The National Archives made an agreement with the genealogists in DIS-Norge about transcription of parish registers. DIS members received copies of registers from their region and transcribed and proofread them. A crucial difference from what was published in the Digital Inn was that these registers were published directly on the Digital Archives. In a news report, Lars Nygaard (2001, p. 25) from The National Archives wrote that the purpose of the agreement was to *"increase the volume of searchable church records of acceptable quality on the Internet"* beyond what was realistic through publicly funding.

From its start at UiB in the late 1960s, digitization had mainly occurred through transcription. In 2005, large-scale scanning began. Parish registers for the entire country were digitized first. The scanning itself went quickly as it was not based on original records but on the microfilms that The National Archives and the Mormons began in the 1940s. However, indexing was a major task, organized as a project involving the entire National Archives organization (Nygaard, 2006). The following years, several other large-scale scanning projects were conducted. Even though less searchable, the scanned records quickly became the most used material (St.meld. 24 (2008-2009)).

In 2008, the Digital Archives celebrated its 10th anniversary with a digital "festschrift". Contributors included the National Archivist, people who were involved in starting the Digital Archives (e.g. Jan Oldervoll from UiB), vocational users like historians and "popular users". The latter praised the Digital Archives (it was, after all, a festschrift). One emphasized the democratic project that made access

independent of where you lived, while another user praised the platform because of other users who could always answer questions (Davidsen and Sæther at Digitalarkivet 2008).

As mentioned, archival institutions opened up to the public at the end of the 20th century, and digitization was not the only method. A white paper on libraries, archives, and museums from 1999 had stated that "*active outreach, where institutions in various ways approach an audience, is necessary*" (St.meld. 22 (1999-2000), p. 16). From the early 2000s, The National Archives curated outreach activities like exhibitions, lectures and posts on social media. In 2010, a separate outreach unit was established that remained active for some 6-7 years (Seim, 2016). Occasionally, The National Archives also got attention in national media, such as when launching digitized records from World War II on April 9th (the date when Norway was invaded in 1940), and through the Norwegian version of the BBC program *Who do you think you are*?, where celebrities search for their roots. The latter gave the Digital Archives a peak in traffic (St.meld. 7 (2012-2013)).

Towards the new Digital Archives

A white paper from 2009 had identified digitization as a policy goal for preservation and dissemination of cultural heritage (St.meld. 24 (2008-2009)). In 2017, The National Audit Office of Norway released a report evaluating the LAM sectors' implementation of this policy (Riksrevisjonen (2016-2017)). The report was discouraging. Only the library sector was deemed satisfactory, due to the ongoing mass digitization in The National Library. The audit office was particularly critical towards the archive sector, and the report concluded that The National Archives was not on track to reach the ambition to digitize 10 percent of its holdings by 2030. Furthermore, about half of the digitized material in the archive and museum sectors was not accessible to the public - partly due to legal restrictions, but also because of insufficient indexing. The most critical issue, however, was not slow digitization of analogue records, but concern about long-term preservation of born-digital archives, especially in municipalities (Riksrevisjonen, 2016-2017).

In January 2018, the Digital Archives celebrated its 20th anniversary, marked by another Festschrift. At the same time, plans for significant changes to the Digital Archives were made behind the scenes. It had already been suggested some years earlier to make the Digital Archives a publishing site not just for The National Archives, but for all Norwegian archive-keeping institutions. This idea became more pertinent after The National Audit Office 's report. In December 2018, a new version of the Digital Archives as a national platform for digital access to archives was symbolically opened. In the autumn of 2019, The National Archives received a significant budget increase over four years, and over the next few years, the platform was significantly transformed in two ways (Stokstad, 2020): First, it opened as a publishing platform for all archival institutions – including municipal and private archival institutions, and libraries and museums that preserve private archives. By the end of 2019, 25 LAM institutions had published material on the Digital Archives, and two years later, 48 institutions had made publishing agreements (Arkivverket, 2019, 2021). Second, the investment in the Digital Archives from 2020 not only aimed to strengthen digital accessibility but also to improve the insufficient capacity for long-term preservation of digital-born records that The National Audit Office had addressed. Thus, the Digital Archives was expanded to also become a digital repository where entities other than The National Archives could deposit their born-digital archives. The first municipal archives were deposited in September 2022 (Arkivverket, 2022).

Throughout the process of reshaping the Digital Archives, collaborative digitization continued, also including new partners. The National Library aided by scanning the 1920 census. A volunteer effort to transcribe the census started in 2018. Since the embargo period for censuses is 100 years, volunteers for the first time had to sign a confidentiality agreement to participate (Arkivverket, 2018).

Around the same time, The National Archives entered into an agreement about parish registers and the 1891 census with the international genealogy companies Ancestry, MyHeritage, and FamilySearch, collectively known as *AMF*. The National Archives provided scanned records and received transcriptions in return. According to the agreement, the archive owns the transcriptions but cannot provide them to AMF's competitors during the 10-year agreement period. AMF was not paid; their motivation was more data in their databases (Digitalarkivet, n.d. a). The first result of this collaboration was published in 2020. The reception of the AMF data was mixed. On the one hand, it provided a lot of new digital records. On the other hand, the data were of poorer quality, as they were transcribed by people unfamiliar with Norwegian and the Norwegian context. This illustrates that while collaborative transcription is a rather "mechanical" form of participation, it does include interpretation (Dong, 2019, p. 85). The AMF transcription created some noise among users, and one user sent an ironic *"thanks for nothing"* to The National Archives (Arkivverket, n.d.). The National Archives eventually organized a volunteer effort where volunteers could sign up to proofread AMF data. As of February 2026, the proofreading is still on-going (Digitalarkivet, n.d b).

A final remark is that the focus on digitization has come at the expense of other forms of public programming. The National Archives has received criticism from historians for downsizing its reading room services (Trettvik, 2022). And in 2022, The National Archives reported that it will no longer prioritize active outreach in the future but rather focus on publishing material for others to disseminate. Rather than stimulating use through different kinds of "storytelling", use is to be made easier by making the material searchable. AI that can read and transcribe handwriting is an important part of this strategy, and training the algorithms is a new task for volunteers (Lande, 2022). Even though The National Archives occasionally still use social media and other outreach genres, this marks a departure from the active outreach policy that was initiated in 1999 (cf. St.meld. 22 (1999-2000)).

Discussion

Platforms like the Digital Archives are easily recognizable as heterogeneous networks or assemblies that bring people and non-humans together. Simultaneously, they transform them: Analogue documents are digitized, and since they have different affordances than the paper originals, they are accessible to new users and new kinds of use.

Our first research question concerns the role of non-archivists in the development of the Digital Archives. As we have seen, non-archivists have been significant both prior to and after the establishment of the platform in 1998. When the Digital Archives quickly became a success, it was because The National Archives, in the role of a translator, enrolled earlier digitization projects into the new platform. These were themselves hybrid and heterogeneous, as records had been digitized by different actors for various reasons: The University of Bergen's 1801 project can be seen as proto-digital humanities. Teleslekt's digitization was initially a re-employment program for redundant telecom workers. (RHD in Troms received support for the same reason. Thus, even though the nexus of industrial and cultural policy that characterizes digitization in The National Library (cf. Bastiansen, 2023) is not as prominent in the story of archival digitization, it is found.) If we zoom out and include also remediation that would later impact digitization, we even find a theological purpose in the Mormons' microfilming from the 1940s.

We also note that The National Archives was initially a somewhat reluctant entrepreneur. While it had been collaborating with the University of Bergen since the 1970s, it resisted pressure from academic historians to take on more responsibility for digitization (cf. Sirevåg, 2002). When standardization began in the 1990s, it was part of a wider committee but not the working group. The National Archives finally took charge in the late 1990s, when some of the material was at risk, and when it had been

criticized by genealogists for neglecting that material. Without assigning agency to the digitized records, we might at least say that they had acquired a certain gravity. Even though scattered and not yet assembled, digitized records had become an entity that The National Archives could not easily ignore.

As a sovereign entrepreneur, The National Archives has continued to expand the network, both by enrolling new technology (e.g. scanned material from 2005 and AI in the 2020s) and by enrolling more human actors to participate in digitization. At this stage we see what we are probably most accustomed to thinking about when discussing participation in a LAM context: laypeople contributing to the collection on a voluntary basis. Eventually also The National Library and commercial actors AMF were enrolled.

Our second research question is motivated by a concern that trust in archives might be undermined by participation, which can potentially undermine the social contract between archival institutions and the public (Yakel, 2011). Jansson and Huvila (2019) make a similar remark that the quality of participants' input is critical in the economic logic of participation, which is the dominant logic in the Digital Archives' case. This raises the question of how participation is managed or negotiated to achieve the benefits while keeping the risks at bay.

It should be said that, overall, The National Archives seems to have succeeded in its role as a translator – there are relatively few signs of protest. Still, the dissatisfaction with AMF's transcriptions is an indication that the National Archives' program could come under strain – low quality led to complaints and potentially to weakened trust.

We find various ways that The National Archives has navigated this tension between voluntary contributions and professionalism, i.e., between encouraging participation and keeping it in check. Proofreading is crucial. According to the DIS-Norge agreement of 2001, proofreading of members' transcriptions was to be done by other members. Eventually, a larger share was done by The National Archives. Notably, the reason is not distrust in the volunteers, but rather that it turned out to be difficult to recruit volunteers for proofreading (Slekt og Data, 2010; Arkivverket, 2016). The National Archives also requires verbatim transcriptions even when the original is assumed to be wrong, despite criticism from users that this makes retrieval difficult (Aase, 2002; Lomeland, 2014). Finally, standardization such as HISTFORM and technical guidance are important.

All these measures can be considered mechanisms to strengthen the program of acquiring resources to digitize more records, while not jeopardizing the trustworthiness of the records (cf. Latour, 1991). In a study of citizen science in astronomy, Kasperowski and Hillman (2018, p. 569). argue that protocol used to govern citizen scientists' observations functions *"to reduce the scope of subjects' perception through a program […] that renders them able to see on the behalf of professional scientists"*, and that the protocol effectively *"constructs volunteer contributors as epistemic subjects"* When mobilizing volunteers to transcribe, The National Archives faces the same challenge as scientists who mobilize citizens. The requirements they impose on volunteers, codified in documents such as standards, guidelines and templates, can be seen as recipes or algorithms that aim to secure the program 'digitize with professional quality' and, so to speak, transform participants into archivists when they transcribe. This is especially important in volunteer efforts organized by The National Archives for publication on the Digital Archives. While there were rules for digitization in the Digital Inn, participation here was also managed through separation (cf. Yakel, 2011). Initially, the inn was a separate website for material digitized on volunteers' own initiative. When the Digital Archives opened to other institutions in 2018, the content in the Digital Inn was included, and the distinct URLs were discontinued. Thus, the

difference between actors transcribing on behalf of The National Archives and on their own behalf became less visible. Yet, there is still a difference since individual contributors transcribe on a "licence" from the Digital Inn, whereas archival institutions do not.[4] Thus, the Digital Inn remains an example of "*peer production on the periphery*" (Yakel, 2011, p. 88).

The protective mechanisms we have discussed so far concern management of participation after 1998. But as seen, the foundation created earlier and enrolled into the Digital Archives was also heterogeneous. It was digitized prior to any standardization, partly according to "the old way of teaching people to swim". Some of it was transcribed by historians; some by people with no professional expertise in historical sources.

It could be argued that The National Archives has mainly managed these contributions from non-archivists *rhetorically*. Overall, the prehistory, i.e., the digitization prior to 1998, has become less visible. To some extent it is found in policy documents that describe LAM and digitization from a broader perspective, such as the LAM white paper (St.meld. 1999-2000, pp. 56-57) and the digitization white paper (St.meld. 24 (2008-2009), pp. 28-29). In The National Archives' own publications, however, the history is less visible. In the annual report for the establishment year, the Digital Archives is briefly mentioned as The National Archives' *"publication of digitized archival sources on the Internet"* (Arkivverket, 1998, p. 13). The report also mentions that the Digital Archives is a collaboration with UiB, and that The National Archives took over two registration units from The National Library/Teleslekt. The origin of the digitized records is not mentioned. In 2004, the Digital Archives is described as *"The National Archives' channel for publishing digital archive material in image, text, and database format"* (Arkivverket, 2004, p. 14). Except for 2007, later annual reports omit even the collaboration with UiB, as well as the pre-1998 history. In the 25-year anniversary news article with which we started this article, the history is described as follows: *"The Digital Archives has evolved from a solution where The National Archives published its own digitized material to become a national solution for state, municipal, and private archives"* (Digitalarkivet, 2023). Here, the prehistory is entirely absent

To be fair, the pre-1998 history has been available on the Digital Archives' website. Here, a page called "The history of the Digital Archives" (Digitalarkivet, n.d. c), with links to the festschrifts we have mentioned above, was available just a few clicks away from the front page. However, when the front page on the Digital Archives' website was changed in winter 2024–2025, the history page and Festschrifts were not carried forward. Nor are they found on the old website, which is still available.[5]

We must emphasize that The National Archives is to our knowledge not claiming anything untrue when describing the Digital Archives – it was, after all, formally established in 1998. Thus, we cannot say this rhetoric is an attempt to conceal the contributions of non-archivists or the somewhat messy foundation that the platform is based upon. Yet, we argue that it has a certain effect. By downplaying the history prior to the official opening in 1998, an impression is conveyed that the digital material is

[4] Compare the profiles of, e.g., institutional contributor Norwegian Labour Movement Archives and Library (https://www.digitalarkivet.no/actors/900/arbeiderbevegelsens-arkiv-og-bibliotek) and individual contributor Alf Hamar (https://www.digitalarkivet.no/actors/1119/alf-hamar).

[5] The URLs to the history page and the festschrifts are still valid, and they are also searchable on Google. On the history page, this path is found: Hjem / Informasjon om Digitalarkivet / Vi og vårt / Historia til Digitalarkivet. As of February 2006, however, the third level in the path (the link https://www.digitalarkivet.no/content/history-da/) is broken.

less heterogeneous and that the professional archival control over the digitized records has been more persistent than what is the case.

Conclusion

In this article, we have approached the Digital Archive as an actor-network. ANT has provided a valuable analytical approach for the investigation for two reasons. First, it offers a flexible methodology that allowed us to unveil the particular part of the platform's development that we have been looking at "agnostically" rather than to presuppose any particular configuration of the network or pre-define the role of any actor or entity. Second, the notion program of action provided a fruitful analytical tool for understanding how The National Archives has managed contributions from various contributors to the Digital Archive.

The digitization of archival heritage in Norway can be divided into several distinct phases. The first phase begins in the early 1960s and lasts until 1998. This was before the official opening of the Digital Archives, yet the digitization that happened here formed the foundation in 1998. The second phase lasts from 1998 to 2018 (effectively 2019). During this period, the Digital Archives was a publishing platform for The National Archives. The third phase begins in 2018, or effectively in 2019, when the Digital Archives was transformed into a national platform for both digitized and born-digital records. This phase is only superficially addressed in this article.

Non-archivists have been crucial in all these phases. The National Archives has been engaged in digitizing for 50 years but did not become the dominant actor until the 1990s. Since then, it has actively used sought participation from users, organizations and LAM institutions by mobilizing new participants to digitize, as well as enrolling previous remediations into the network.

Archival scholars have asserted that participation offers various opportunities for archival institutions. It can, inter alia, increase legitimacy and social relevance and provide resources. At the same time, it poses a potential threat to the records' trustworthiness. Thus, participation must be managed, for instance, through moderation and separation. We have identified several ways that National Archives has negotiated this risk, including training and standardization, requiring verbatim transcriptions, and relegating participation to separate spaces. Finally, we have argued that the heterogeneousness of the Digital Archives is also contained by the way the platform's history is told**.** Although the last argument is, admittedly, somewhat speculative, this and the other measures The National Archives has taken may be seen as part of their mandate to secure records and make them trustworthy and available.

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