

The Nordic Model of Digital Archiving

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Chapter 4

A continuum of recordkeeping?

The possibilities and challenges of born-digital public records in Denmark and Sweden

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Introduction

Western European recordkeeping traces its origins to the Middle Ages, assuming its modern form with the development of nation states in the nineteenth century. Recordkeeping practices evolved to support administrative needs at the time and slowly emerged as a routine practice in the handling of casework, as in recordkeeping today. These routines and practices were implemented at a governmental level and at a regional level (Kjölstad 2012). The Danish *Archives Act* (1889) instituted two main and partly separate goals: support of the government administrations' daily work and recordkeeping; and the preservation of a national history and identity (Linvald 1933). These goals have influenced recordkeeping practices and methods in Denmark ever since (Paasch 2018). The Swedish National Archives was officially founded in 1618; Swedish freedom of information legislation dates from 1766, granting citizens the right to access official records and necessitating the management of current and historic records. These developments have affected Swedish administrative and legislative structures ever since, with public agencies having far-reaching responsibilities to preserve their own records and make them available to the public (Burell and Sjögren 2018). Swedish recordkeeping evolved with influences from international archival theory, inspired by the *Dutch Manual* in the early 1900s, with France as a role model (Norberg 2007).

The records continuum model has long been considered foundational for understanding the multidimensional nature of recordkeeping. It does not distinguish between the traditional lines of active or administrative use of records versus archival management but rather tracks recordkeeping across its four dimensions of creation, capture, organisation, and pluralisation and through multiple dimensions of accountability over space and time (McKemmish et al. 2010). The records continuum model was created in the 1990s and has been described as a new paradigm, shifting away from the older lifecycle approach and its sharp divisions of records management and

archives management; the continuum is better suited to address the realities of digital records (Upward 1996, 1997). Since its conception, the records continuum model has proven its worth in theory and practice in many contexts, and it continues to evolve and develop through new research and applications (Smit 2017; Mattsson 2022). Denmark's and Sweden's public archives have strong legislative mandates to collect, preserve, and make available born-digital public records. While the two countries' recordkeeping traditions predate the records continuum model, we believe that Danish and Swedish principles and practices can be discussed using its concepts and terminology.

The records life cycle assumes that recordkeeping follows a predictable timeline and distributes set responsibilities to two distinct sets of record professionals: records managers and archivists, whose duties are neatly separated through the transfer of custody. Within the continuum, recordkeeping is viewed as "a continually interacting and evolving set of contingent activities with individual, institutional, and societal aspects" (McKemmish and Gilliland 2013, 93). In his paper "Structuring the records continuum part one: post-custodial principles and properties," Frank Upward states that the main objective of the continuum is to be "freeing archivists from the need to debate custody" (Upward 1996, 268). Nonetheless, custody remains an issue in the context of our study. The continuum consists of four axes: identity; evidentiality; transactionality; and recordkeeping, which together "encapsulate major themes in archival science" (Upward 1996, 277), in addition to its four dimensions of create; capture; organise; and pluralise. In this chapter, we structure our discussion by these four dimensions to show how Denmark and Sweden, though following mainly pragmatic archival traditions with recordkeeping practices that originated in a records lifecycle approach (which in some respects still lingers), nevertheless have evolved to become close to the records continuum model. We use the continuum as a theoretical and analytical lens through which we view the interdependence of recordkeeping theory and practice.

Our chapter discusses the extent to which the records continuum model allows a deeper understanding of archival theory and practice in Denmark and Sweden, two countries that, to large extent, share a common archival history despite having chosen different strategies for recordkeeping in the past century. We focus on born-digital records as we explore how recordkeeping legislation, collaboration, infrastructure, and technology can help realise the potential of the continuum. We reflect on the challenges public archives face in creating coherent recordkeeping practices within their respective legislative, financial, and administrative frameworks and their formerly shared but presently distinct archival traditions. While we use the term recordkeeping encompassing activities in both personal and organisational contexts, this chapter primarily addresses public or governmental records.

Create

The first dimension represents the time and place where an event takes place, and a record is created. Both the Danish and Swedish national archives issue regulations and recommendations and give advice on recordkeeping in a way that resembles the records continuum model's recommendations on securing records throughout their existence, no matter who has custody. According to the Danish *Archives Act*, this proactive approach as a mandatory requirement only includes public agencies at the level of the national government and does not apply to regions and municipalities, although most of them follow suit, or to private records, while the Swedish *Archives Act* also applies to municipalities, but not to most private businesses. The main difference between Danish and Swedish practice in this regard is that in Sweden, public agencies keep records in their own custody for a much longer period, generally for decades.

According to Upward, "To be effective monitors of action, archival institutions will need to be recognized by others as the institutions most capable of providing guidance and control in relation to the integration of the archiving processes involved in document management, records capture, the organization of corporate memory and the networking of archival systems" (Upward 1997, 21). The Danish national archivist can, according to the archival legislation, determine how public agencies create archives by: 1) requiring government agencies to report systems they intend to use for recordkeeping and archiving; 2) influencing how these systems are established, structured, defined, and used; 3) determining whether the systems can live up to the technical preservation strategy (conversion and migration); 4) setting technical demands for archival systems; and 5) defining how records must be preserved. The Swedish National Archives, however, does not require government agencies to report systems or get approval before use. Nonetheless, there are demands on records creation and care in Swedish government. Government agencies are required to issue strategies for preservation of digital records and to adhere to technical demands specified by the national archives (National Archives Code of Statutes (RA-FS) 2009, 2). This latter, however, is not mandatory until the records are transferred to the archives.

Early in the 2000s, The Danish National Archives decided to stop closely regulating government agencies' recordkeeping practices, which they had done since the 1960s in close cooperation with the government administration. They no longer wanted to influence recordkeeping in the digital age but rather let government agencies determine the practices that best suited their individual fields of expertise and operations, citing concerns that the national archives might skew the "real" picture of administrative practices in the agencies (Kjellberg and Hall-Andersen 2017). Recordkeeping practices prior to records being in the custody of the national archives were seen as outside the purview of the archives. This clearly deviates from the view of custody in

the records continuum model and demonstrates that The Danish National Archives was not guided by continuum theory in developing their strategy but was perhaps responding to developments in society around them, within the constraints of their authority and budget. This did not last, however. In 2013, after ten years, the national archives reinstated its regulation of recordkeeping practices in government agencies due to concerns over erratic and variable uses of systems and recordkeeping that might negatively affect the future availability and usability of records (Paasch 2018).

In Sweden, records are considered official at a very early stage, generally as soon as they are created (see also Chapter 3 in this volume).¹ And while The Swedish National Archives does not regulate systems of records creation and keeping in government agencies, they have established criteria to guide the implementation of these systems. When creating records, public agencies should “(...) use material and methods appropriate as regards the need for long term preservation” (Swedish Code of Statutes 1990, 782 § 5). The *Archives Act* has a steering role in relation to recordkeeping that applies “(...) before the systems are launched and the actual creation of information begins” (Riksarkivet 2020, 38, authors’ translation). In Sweden, the National Archives traditionally has had a strong role as experts, and though this remains the case, it has been challenged during decades of digital recordkeeping due to the abundance of formats and standards in various areas of government activity (Klareld 2017). Attempts to create closer collaboration between the national archives and government agencies include common specifications or *förvaltningsgemensamma specifikationer* [common technical specifications] that describe how information is to be structured, marked with metadata, and packaged, to promote interoperability.² Planned to be implemented through collaborative projects in the development of e-services and e-archives (but not as formal, mandatory requirements for procurement), the idea proved difficult to accomplish in practice, with few public agencies willing to spend resources on an activity they perceived to be outside of their core business (Riksarkivet 2019, *Slutredovisning av regeringsuppdrag om förvaltningsgemensamma specifikationer*).

Capture

The second dimension of the records continuum model focuses on the more defined form a record attains when communicated or connected to other records in a system, where it becomes part of a chain of events and obtains status as evidence. Danish and Swedish recordkeeping align with the continuum model in that capture is closely connected to, and seen as prerequisite for, pluralisation.

Danish minimum requirements for recordkeeping or archival systems, set through legislation, prescribe that systems retain information about the date of the document (when was it received or sent) and a short description of the

contents of the document (title or headline). Not all documents are stored in these systems, which are structured as registries of case files. Documents that are considered part of a case and therefore must be retained include those with importance to case files or management; requests, complaints, and replies from citizens regarding their own cases; external inquiries with importance to specific case files; internal documents in their finished form with importance to a case file; and drafts with importance to a case or case management. The rules apply regardless of the medium of the record – electronic or paper – and must be filed “as soon as possible” (no later than seven days is recommended but no actual deadline is fixed). In addition, all incoming and outgoing mail must be managed in accordance with *The Publicity Act (Offentlighedsloven)*; nonetheless, the exact rules for when email, specifically, is to be transferred to a recordkeeping system are unclear, and the management of email remains the responsibility of the individual public servant (Justitsministeret 2021).

Records created or received by Swedish public agencies, regardless of medium, are to be preserved, kept in order, and handled in ways that ensure: “(1) The right of free access to official records; (2) The information requirements of the public jurisdiction and administrations; and (3) Research requirements” [Swedish Code of Statutes 1990, 782]. Registration plays a vital role. “Public records should be registered as soon as they arrive at or are created by a public agency” (Swedish Code of Statutes 2009, 400 § 1). The register should state: “1. Date when the record was created, 2. registry number or other designation, 3. where applicable information about sender or receiver, 4. briefly what the record concerns” (Swedish Code of Statutes 2009, 400 § 2). The traditional “diarium” is a registry where incoming and outgoing correspondence are organised by manually applying metadata such as date, case identification ID, and sequence number. This is traditionally done by registrars. Each notification in a registry is considered to have been archived as soon as it is made, to uphold transparency in government operations through freedom of information. This practice necessitates a continuum-like understanding of records, archives, and custody, one that is entirely incompatible with the records life cycle model.

Swedish citizens not only have the right to know what documentation public agencies preserve, but also how and in what context the information has been used. The Swedish National Archives’ guide on registering public records (2019) says registration can become fragmented due to increased automation and the number of systems used, but it is still an important tool for providing records with “fixation and context in the organisations’ document flow” (Riksarkivet 2019, 7) and for upholding the principle of public access to records. The Swedish National Archives advises using the classification structure of process-based archival inventory as the basis for registration.

Organise

The third dimension of the records continuum model focuses on the record in the broader context of an archive. How an agency carries out its recordkeeping regime and informs the archives of its operations.

Danish archival legislation requires all public agencies to address “archival considerations” (*arkivmæssige hensyn*, author’s translation) so that the records, once transferred to the archives, are in a format that makes it possible to make them available to users (Arkivbekendtgørelsen, 2003). The legislation further states that government agencies must use “a manual or electronic archival system” (Chapter 2, § 9) that ensures these “archival considerations” (Bekendtgørelse om offentlige arkivalier og om offentlige arkivers virksomhed 2003). There is a further requirement that public agencies must use a recordkeeping or archival system (Administrative Circular no. 8, January 12, 1998 (1998)). Danish archival legislation thereby requires agencies of the national government to have recordkeeping or archiving systems – but, oddly, does not require that they actively perform professional recordkeeping practices or follow internationally recognised standards. Instead, agencies must describe their recordkeeping practices to the national archives before initiating new IT systems using a minimum of recommended metadata as described below (Paasch 2018, 297–308).

As part of the Danish National Archives preexisting mandate to approve recordkeeping and archival systems, a 2013 circular emphasised that rules for reporting and getting systems approved had changed (Statens Arkiver 2013). The new requirement specified that recordkeeping and archival systems must adhere to a clear definition of a dossier/file (*sagsbegreb*) and have a systematic register of their entire field of responsibility; certain metadata must be applied to all documents (Kjellberg and Hall-Andersen 2017). Dossiers/files must have a unique identifier (e.g. number), a title (preferably based on a systematic naming procedure), and a subject (which must be content-based and refer to a systematic analysis of the field of authority). Documents must have specific metadata including a unique ID; title; date of creation or receipt; recipient and sender (for correspondence); description of storage media (paper, digital, audio, object, or video); and how it relates to a dossier/file. If more than one part of the public administration uses the same system or if there is more than one record creator within an agency, this must also be described (Statens Arkiver 2013). Government agencies are required to describe how they will use their systems and to update this description as necessary. The description must contain: a detailed account of the purpose and content of each system and how it relates to other systems; which functionalities the administration uses within the system; how dossiers/files and documents are named; how dossiers/files are created and closed and how they are used and maintained; registration procedures; how preservation formats are handled; which types of files are allowed; whether there are

digitised non-digital materials within the system; the history of system migrations; changes in fields of authority; and transfer to the national archives. In addition, the agency must describe how it quality-assures recordkeeping practices and the use of its systems, for example, through systematic self-audit and sampling practices (Statens Arkiver 2013).

These requirements only apply to public agencies of the national government and are minimum requirements; agencies are encouraged to develop their recordkeeping practices further. Introduced in 2013, these requirements are still in force. As with other elements of the Danish preservation strategy, as described in the archival legislation, The Danish National Archives inspects public agencies for compliance with these requirements. Physical inspection visits are very limited, however, due to a lack of staff at the archives. Quality control is most often conducted via questionnaires.

In Sweden, this dimension of the records continuum model is characterised by defining the creator of records designated as archival, since any record can belong to only one record creator. The rule of “one archives, one archives’ creator” can be problematic in a digital world, particularly with increasing reliance on outsourcing. The Swedish *Archives Act* says public agencies are to “1. Organise the archive in such a way that the right to access public records is facilitated, 2. Create an archival description that gives information about what types of records can be found in the archive of the agency; describes how the archive is organised; and provides a systematic archive schedule” (Swedish Code of Statutes 1990, 782 § 6, author’s translation).

The terms contextual description (*arkivbeskrivning*) and archival inventory (*arkivförteckning*) are found in the *Archives Act* but are increasingly being replaced with the term archival description (*arkivredovisning*) (Riksarkivet 2012). Contextual description is not a description of the records but of the creating agency: their business; the rules that apply to records creation; search facilities; the archive(s) that are a result of operations; and where the archives are preserved. The traditional Swedish archival inventory was designed to account for both the physical items and the logical content of the archives (Smedberg 2008). A national inventory plan, the so-called general archival inventory scheme (*allmänna arkivskemat*), was first issued in 1903 for public agencies; changes were made in 1962, 1979, and 1991 but the main principles endured. The purpose was to create a common structure or model based on types of records and their function in the business of the archive’s creator. The inventory has set headings under which series and volumes are described. The first version gave the option to create additional series as necessary; this option was removed in 1962 in favour of fixed series. The general archives inventory of 1991 consists of the following main sections:

- A Protocols and agendas
- B Outgoing records
- C Diariums

- D Ledgers and registries
- E Incoming records
- F Records arranged according to subject
- G Economic records
- Ö Other records

An inventory ideally is initiated when the records creator commences their business and thereafter is kept continuously to facilitate the discoverability of public records. This resembles the records continuum model in emphasising continuity in management from creation through to pluralisation. Records scheduled for destruction should also be described, so that they can be discovered for however long they are kept. The requirement to inventory records from creation has been called the “double application of the principle of provenance” (Burell 1999, 49, author’s translation), in which government agencies’ repositories and archival holdings are both structured according to the same principles.

This approach was intended to simplify the fulfilment of citizen access to information requests but can in fact make it difficult for citizens to understand how agencies organise their work and their records. An extensive investigation and development project by the national archives concluded that archives of government administration should be described based on work processes rather than the traditional fixed archival inventory. This makes it necessary to analyse business processes to understand what information an agency creates and uses. The new system, implemented in 2013, distinguishes between logical and physical order, where the logical presentation should be based on business processes, which must be identified, described, and linked to the documents they create. Records are classified according to areas of activity and work processes, clarifying their connection with case processing and the agency’s other activities. This process-based archives description is intended as an instrument for transparency and to improve information management.

Since digital recordkeeping is closely related to information security, the national archives and the Swedish Civil Contingencies Agency have published joint guidance on creating process-oriented information surveys (2012) which specifies three layers: business; information; and information carrier. The basis of the analysis is work processes, not the agency’s organizational structure. The survey is recommended to be done through a workshop where different professions cooperate. The interrelation between the agency’s registry and its archive description is emphasised, since both concern “classifying and providing the records with metadata to make possible [information] organisation, search ability and re-use of information in its context” (Swedish Civil Contingencies Agency (MSB) and Swedish National Archives 2012, 31, authors translation). Increasingly the term information is used instead of records since

Several of the terms used in archival legislation can be perceived as belonging to a paper-based administration. In order to facilitate communication between different stakeholders affected by archival and information questions are used in the guidance the concept of business information synonymous with public documents and archives (Swedish Civil Contingencies Agency (MSB) and Swedish National Archives 2012, 3, authors translation).

The Swedish National Archives conducts inspections at government agencies to check that they are fulfilling their obligations under the *Archives Act*. Private bodies that store public documents, such as Iron Mountain and similar records management and storage companies, are also inspected by the national archives. Based on these inspections, the national archives may require changes to comply with its regulations or may simply advise the agency's archives management based on the *Archives Act* and other archival regulations. If the national archives decides changes are necessary, the agency will be advised to make the changes and report back. There are, however, no fees or any other penalties that the national archives can use to ensure that their advice and requirements are followed (Riksarkivet 2020).

Pluralise

The fourth dimension represents the overarching social context in which a record is used: the record as part of collective, historical, and cultural memory (Upward 1996).

Danish legislation does not contain any direct requirements for the use of records and archives, although the overall goal of recordkeeping is focused on citizen access to information. The national archives' appraisal and preservation strategy have deep roots in what Cook called the memory paradigm, with an emphasis on preserving records as historical documentation (Cook 2013). The focus is thus on preserving documentation of society for future generations, primarily on a national level. The national archives also collects records with "administrative and/or legal value," but only if these also have "historical value." This is apparently inspired by Schellenberg's primary and secondary values of appraisal to serve historical research (Schellenberg 1956), in contrast with Sweden, where Cook's evidence paradigm is more prevalent. The Danish focus on memory dates back through the long history of Danish government archives and is reflected in the role of the national archives. While The Danish National Archives must approve recordkeeping systems, it does not have input into agencies' record creation or management processes. The quality of recordkeeping when records are in active use is therefore not apparent before the systems are transferred to the archives. This means that while the national archives has adopted what on many levels resembles a continuum-based approach to digital archiving, it cannot adopt the whole model. The national

archives schedules transfers of public records at fixed intervals, setting specific deadlines which government agencies must meet; agencies are furthermore required to pay for the cost of transferring their records to the archives. To assure compliance with its legislation, the national archives conducts oversight over government agencies mainly through questionnaires which can, if necessary, result in a physical inspection as well (Paasch 2018, 168–171).

The Danish preservation strategy for digital records is based on format migrations within the terms of the OAIS model. As format migrations typically prioritise content over user interface and interactivity, the original context or creation and use of the records can be obscured. Nonetheless, this strategy upholds The Danish National Archives' goal of making digital records readily accessible at any time (Paasch 2018, 223–224).

While Danish national archives' approval of recordkeeping systems is required before agencies put them into use, agencies are solely responsible for recordkeeping processes. Moreover, while the archives determine formats for long-term preservation, agencies are solely responsible for converting their records into the designated formats. The Danish National Archives then receives the records and performs quality assurance. If approved, custody of the records is officially transferred to the archives. Transfer intervals are fixed by the national archives and occur roughly every five years. After the transfer of custody, the archives are responsible for further preservation and migration of the records; additional format migration happens every five to ten years, depending on the specific formats and how they develop. The archives provide users with access to the records along with contextual descriptions as well as other guidance as necessary (Paasch 2018, 246–248). This strategy has, with minor adjustments, been in place since the 1970s and been tested at scale from the early 1990s. By the end of 2020, The Danish National Archives held 271 TB of born-digital materials and 520 TB of digitised materials (Rigsarkivet 2021). Despite this system of format migration, public researchers and national and local government agencies still prefer using the original systems and interfaces, which often remain active at the records creating agency (Rigsarkivet 2021).

The Swedish *Archives Act* establishes that archives are part of cultural heritage. The *Freedom of the Press Act* ensures the right to access official documents: “To encourage the free exchange of opinion and comprehensive information, every Swedish citizen has the right to access official records” (Swedish Code of Statutes 1949, 105 § 1; *Public access to information and secrecy act*, 2020). This requires access for citizens as soon as a record has been created and captured in an agency's recordkeeping system. Access is further endorsed through *the Act on the re-use of documents from the public administration* (2010, 566) has as its purpose “to promote the development of an information market by facilitating individuals' use of records provided by government authorities” (authors' translation). Government agencies must have approval from the national archives before they destroy records

(Riksarkivet 2019). Thus, all records organised according to the third dimension of the records continuum model are, in theory and legislation at least, already pluralised according to the fourth dimension.

The Swedish National Archives inspects government agencies approximately every five years. There are, however, no deadlines for transfer of public records. Instead, it is preferred that agencies keep custody of their records for as long as possible. When records are transferred to the archives, the delivering agency must pay two types of fees: a *reception fee* to cover the one-time cost of delivery, control, and registering; and a *preservation fee* to cover the annual costs of preservation, care, and provision of the archives for as long as the records are preserved (Riksarkivet, n.d.a). These fees are sometimes considered too high, which has led to government agencies preserving their archives with private corporations (Statens offentliga utredningar, (SOU) [Swedish Government Official Reports] 2019, 58). As a result, records are primarily transferred to the National Archives from discontinued government agencies, at which point all costs become the responsibility of the archives.

Sweden attempted to create a national digital archive run by the State Service Center (SSC), an agency under the Ministry of Social Affairs created in 2012 and responsible for administrative services to the government (Förordning (2012, 208) med instruktion för Statens servicecenter [Regulation (2012, 208) with instructions for the State Service Center]). The SSC would be responsible for records that agencies needed to transfer from their business systems, but which for various reasons were not regarded as ready for “final archiving” with the National Archives. The procurement process to create this archive was cancelled, however, because it was not possible to find a qualified supplier. The National Archives’ digital archive, RADAR, holds approximately 7 TB of data. The first transfers of digital records were made at the beginning of the 1970s, with approximately 1,000 transfers since (Riksarkivet n.d.b).

Discussion

Upward argues that digital media require new ways to allocate authority and responsibility, since the technology allows “(...) ownership, possession, custody or control to be exercised jointly between the archives, the organisation creating the records, and auditing agencies” (Upward 1996, 273), further emphasising that “custodial thresholds can no longer be understood in terms of the spatial limits between a creating agency and an archives” (Upward 1997, 20). However, the question of custody is still very much relevant in both Denmark and Sweden. Both countries have made significant progress in preserving born-digital records in the last 50 years and have been able to obtain legislation and funding to secure born-digital records in the continuum model’s dimensions of create and capture. Danish and Swedish approaches,

despite some differences, position public records from the moment of creation as part of the national cultural heritage, prioritising citizen access to information. There are, however, vital links missing from the continuum dimensions of organise and pluralise that we believe stem from traditions of custody and established responsibilities within government in both countries. Though both are highly digitised societies and the two national archives have been working with born-digital records for decades, traditions of separation between record creators and archives still exist.

The archival threshold in the Swedish tradition is unclear since it has long been the responsibility of government agencies to preserve records in the same way that archival institutions do. This principle has however been difficult to uphold in the digital environment; and unlike The Danish National Archives, The Swedish National Archives is not prepared to assume custody of digital records early on. The Swedish National Archives primarily accepts transfers of digital records that are older than ten years and complete archives only from discontinued government agencies. Danish archives assumes custody of format-migrated born-digital records from public sector administrations after five years and continue to migrate the records as required, every five to ten years.

According to Upward, "In the virtual archive the location of the resources and services will be of no concern to those using them" (Upward 1996, 282). For those providing access to archives, however, the location of resources and services are of great importance. The Swedish government sector is increasing its use of outsourcing and other forms of private involvement in government services and activities. The Danish National Archives also is under pressure when it comes to the question of custody, as the early transfer of digital records to the archives has created a rising cost of maintenance, including not only digital storage but also monitoring and continuing migrations, which drains resources from other areas and services.

In both countries, the records lifecycle approach still lingers, especially when it comes to recordkeeping in active systems. Government agencies are largely responsible for their own recordkeeping, although both national archives try to influence and advise on best practices. Both countries are challenged by the fact that only limited resources are made available for records management in government agencies. Sweden has registrars that assume some responsibilities, as does Denmark, but often in a fragmented or very limited way. There is a lack of consistent expertise within the agencies, which makes the archives' attempts to connect and collaborate with agencies more difficult. At the same time, agencies do not consider either recordkeeping or archiving as part of their core business. This creates a void in the continuum that has consequences for all aspects of the quality of the records and archives.

There are differences in how the archives' role has been shaped through history. In Sweden, the emphasis on transparency of government has resulted

in a closer working relationship between government agencies and the national archives than in Denmark. In Sweden, a collaborative approach has long been considered ideal: archival authorities issue rules and regulations and, through guidance and inspection, ensure that government agencies achieve satisfactory recordkeeping. Public records should be managed consistently regardless of when they are created and where they are stored, and all government agencies are fully responsible for their records management from creation until formal transfer to an archival authority, which is typically done at a much later stage than in Denmark. The Swedish concept of the archive has been described as holistic since, formally, “(...) records management is understood as a dimension of the archival function” (Kallberg 2013, 84). Although there is still a division between the practical functions of archives and records management, together they shape the keeping of records in a way that corresponds well with the records continuum model.

The long history and strong traditions of government administration in Sweden and Denmark mean that competing interests, traditions, and legislation can be either opportunities or challenges for the archives. The Danish *Archives Act* (*Arkivloven* 2016) works in connection with the *Public Administration Act* (*Forvaltningsloven*), *Publicity Act* (*Offentlighedsloven*), and the European Union’s General Data Protection Regulation (GDPR). The Swedish *Archives Act* (*Arkivlagen* 1990) similarly works in connection with the *Public Administration Act* (*Förvaltningslagen* 2017), the *Public access to information and secrecy act* (*Offentlighets-och Sekretesslagen* 2009), Freedom of the Press regulative (*Tryckfrihetsförordningen* 1949/Kallberg 2013, Sweden 1949), and the General Data Protection Regulation (GDPR). These regulations affect various aspects of government administration, including how authorities assure the quality of case work and how they ensure transparency and access to records, guiding agencies in documenting their operations. These regulations are foundational to subsequent access to government records, for government itself, researchers, and the general public.

Swedish and Danish regulations focus primarily on public records. In 1986, Helen Samuels advocated for archival documentation strategies that would “promote the coordination of the activities of many separate archives” (Samuels 1986, 123). She argued that increasingly complex relations between government agencies and the private sector created the need to rethink preservation strategies and “even redefine the very notion of an institutional collection” (Samuels 1986, 112). At the conference “Beyond the Screen: Capturing Corporate and Social Memory,” held in Australia in 2000, Terry Cook critiqued the records continuum model on a similar basis for paying too little attention to “personal or private or family or group archives” (Cook 2020, 286). In both Sweden and Denmark, there remain firm boundaries when it comes to government or private recordkeeping. Suggestions have been made to start regulating selected aspects of recordkeeping in the private sector (Statens offentliga utredningar, (SOU) [Swedish Government Official Reports] 2019, 58), and some private records have been acquired by Danish

and Swedish public archives at the national and local levels, but this collecting has not been comprehensive or systematic and is not required by either nation's archival legislation. Community archives and other kinds of non-governmental archives also exist, albeit outside the purview of the Danish or Swedish National Archives. Samuels' ideal of holistic, comprehensive, and systematic archiving, spanning government and private record creators, remains unfulfilled in both countries.

Finally, in Denmark and Sweden, the continuum model's dimension pluralise happens on a pragmatic level. How are records made available, technically? How soon and to whom? Direct experience with the archival administration of born-digital archival materials is scant, even in 2022. Further interventions are required to uphold the quality of the records and make them more accessible to users. In both countries, archives are understood to be essential to transparency and accountability of government, supporting a robust democracy and serving as society's collective, historical memory. Research is needed that explores how and why the born-digital records of the last half century are being accessed and used, and whether Danish and Swedish recordkeeping approaches positively or negatively affect access to these records.

There are contradictions within the Swedish and Danish approaches to preserving born-digital records which likely stem from their ad hoc development. Parts of these strategies are close to the continuum model, such as Danish regulations requiring archival approval of government recordkeeping systems before the records are created or Swedish efforts to secure the continued collection and management of metadata through recordkeeping practices in government agencies before the records reach the archives. Other aspects speak to the pragmatic nature of both countries' strategies, including the lack of coherent recordkeeping strategies across the domains of both record creators and archival professionals. While both countries have tried to bridge the gap between how born-digital records are understood by implementing inclusive terminology, such as using "information" or "documentation" instead of "(archival) records" (*arkivalier*), gaps remain. Government agencies in Sweden and Denmark are rooted in traditions, hierarchies, and structures that go back hundreds of years. Legal and constitutional constrictions, financial limitations, often obsolete or misguided notions of archives as only cultural heritage institutions, as well as the ever-changing nature of digital information, impose challenges for archives that have yet to be resolved.

Conclusion

Archiving in Sweden and Denmark started long before Upward published his first articles laying out the records continuum model. Danish and Swedish approaches to recordkeeping are informed by the practices and challenges that the

archives have faced while working with government agencies over decades and centuries, as well as, more recently, in response to the digitisation of Danish and Swedish society. They have generally followed a pragmatic approach that has often served their countries well, but without reference to international archival theory to articulate a larger view, there is a lack of a complete or holistic approach that can come when practice is guided by a well-articulated theory. Both countries have developed strategies that resemble the records continuum model, and both adhere to the observation that records are "... always in the process of becoming" (McKemmish 1994, 8). This is evident in Danish efforts to secure long-term preservation even before the records are created and in Swedish blurring of the difference between active and archival phases of records management. Neither the Danish nor the Swedish national archives are solely interested in archives as an end product, but rather they are looked to for proactive intervention throughout time (from creation to disposition) and space (throughout all the agencies of government). Because both countries have strong public sectors and laws, their national archives have been able to affect these interventions through guidelines, regulations, and legislation.

Around the world, national archives experiences recordkeeping traditions and legislation as asset and as hindrance, often simultaneously. The traditional role of an archives within society, going back hundreds of years, can be hard to alter and can influence how national archives functions as public institutions. This is evident in Denmark, where cultural heritage and historic documentation continue to be the focus of the archives in their dealings with government agencies. As a result, the national archives is not always included in government digitisation strategies, even though the benefits of doing so are clear. Sweden, however, has traditionally focused on archives as part of the democratic infrastructure of society. The Swedish National Archives had a deep influence on the records long before their transfer to the archives to establish transparency and accountability within government. While archival legislation is a great asset in both countries, in neither is the archival legislation the only or even primary law to regulate government recordkeeping. Both national and international regulations, including GDPR, shape recordkeeping practices, while constitutional divisions and privacy laws can further hinder the realisation of a holistic approach, such as Samuels' Documentation Strategy, which addresses both government and private records creators. This gap is increasingly important as both Denmark and Sweden continue to expand outsourcing and other forms of involving private corporations in government services and activities.

The records continuum model sets out an ideal for preserving born-digital records, but individual countries' administrative histories and traditions, laws and regulations, as well as archives' role in society and their financial reality, all contribute to the recordkeeping systems that exist today. We contend that recordkeeping theory and practice are never fully distinct but must work together to realise the long-term objective of preserving born-digital materials for the coming generations.

Notes

- 1 A document is classified as official if it has been submitted to, was drawn up by, or is in the keeping of a public authority. In principle, all official documents are public and must be made available to anyone wishing to read them unless in certain cases classified as secret if they contain information relating to the security of the realm, the personal or financial circumstances of individual citizens, or crime prevention activities by public authorities.
- 2 These common specifications describe the demands of metadata for the information and the packaging of the information into Information Packages (IP). They can also be used for Procurement and development of e-archive systems and agency systems. <https://riksarkivet.se/fgs-earkiv-eng>

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